

For Public Comment

Draft

CONTINUING PLANNING PROCESS

for

Water Quality Management

**State of Maryland
Maryland Department of the Environment**

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CHAPTER 1.O INTRODUCTION

1.1 REQUIREMENTS FOR CONTINUING PLANNING PROCESS

Section 303(e) of the federal Clean Water Act (CWA) and the United States Environmental Protection Agency's (EPA) implementing regulations (40 CFR §130.5) require each state to submit to the EPA a Continuing Planning Process (CPP) document. Maryland's CPP explains the processes the State uses to administer its water programs. Also, the CPP describes the methodology to develop plans to protect, maintain, and improve the quality of the State's waters. Maryland's CPP document was approved by the EPA in 1976. This document updates Maryland's existing CPP, which was submitted to, and reviewed by the EPA in 1986.

1.2 NEED FOR THE REVISION OF CONTINUING PLANNING PROCESS DOCUMENT

Since the last revision of Maryland's CPP document in 1986, a major reorganization of the State's environmental regulatory programs and Chesapeake Bay-related water quality monitoring and assessment programs has occurred. The consolidation of environmental regulatory programs within the Maryland Department of the Environment (MDE) and Chesapeake Bay-related water quality planning, monitoring and assessment programs within the Maryland Department of Natural Resources (DNR) became effective on July 1, 1995. Now that the reorganization has been completed, it is appropriate that Maryland's CPP be reviewed and updated to reflect the policy, programmatic, and organizational changes that have resulted.

The CPP described in this report is multi-year in scope. It is anticipated that changes in direction and organization will occur in the future as the State's water quality management program continues to evolve. The CPP document will be revised periodically to reflect such changes as necessary.

1.3 PURPOSE AND ORGANIZATION OF CPP

Each state is required to establish and maintain a CPP for water quality management as described under Section 303(e) of the CWA. Maryland's CPP provides a description of the processes the State uses to administer its water programs and to develop plans to protect, maintain, and improve the quality of the State's waters.

In accordance with 40 CFR 130.5, the CPP document must describe how Maryland:

- *develops effluent limits & schedules of compliance*
- *incorporates the relevant strategies discussed in the area-wide “waste treatment plans” and “basin plans”*
- *develops Total Maximum Daily Loads (TMDLs)*
- *updates and maintain Water Quality Management (WQM) plans*
- *seeks intergovernmental cooperation*
- *establishes and implements new or revised water quality standards, including schedules of compliance*
- *assures adequate controls over the residual waste from any water treatment processing*
- *explains the construction needs for wastewater treatment*
- *determines the priority of permit issuance*

Maryland’s CPP also includes, several examples of Maryland’s proactive approach to managing water quality, that go beyond the minimum elements of the CPP. The above mentioned issues are discussed in Chapter 3.0 of this document.

In accordance with 40 CFR §130.7 (a) and 40 CFR §130.7 (c), Maryland’s CPP document must describe how the state involves the general public in its program. Public involvement process is discussed in Chapter 4.0 of this document.

1.4 REPORT DISTRIBUTION

The MDE plans to make copies of the CPP document widely available to State, regional, and local agencies, elected officials, special interest groups, and to the general public. As required by 40 CFR §130.5, Maryland’s CPP document will be submitted to the Regional Administrator of the U.S. Environmental Protection Agency, Region III for review.

1.5 PARTICIPATING AGENCY

In addition to the MDE, there are several agencies involved in the CPP process. These agencies include, DNR, Maryland Department of Agriculture, Maryland Office of Planning, Maryland Department of Health & Mental Hygiene, local governments, etc. Also, see Section 3.5 of this document for more information.

CHAPTER 2.0

MAJOR GOALS OF THE CONTINUING PLANNING PROCESS

2.1 FEDERAL AND STATE MANDATES (PLANNING AND MANAGEMENT)

Water quality planning and management in Maryland are guided by a set of major goals that are embodied in federal and State laws. For more than 25 years, the federal Clean Water Act (enacted 1972, amended in 1977, 1981, and 1987) has provided the foundation for our Nation's water pollution control programs. Pre-existing State and federal programs were completely overhauled after its passage, and major new programs for water pollution control and water quality planning were established.

In addition to the national agenda for restoring and maintaining water quality, the federal government has given special recognition to the Chesapeake Bay as a natural resource of major significance (Section 117 of the CWA). Also, federal Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the US (42 USC 300f-300j-26). This law focuses on all waters actually or potentially designated for drinking use, whether from above ground or underground sources. This act authorized EPA to establish safe standards of purity and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from EPA, also encourage attainment of secondary standards (nuisance-related). The year 1983 marked the end of an intensive period of Bay research conducted by the U.S. Environmental Protection Agency (EPA), and the beginning of a landmark effort to correct environmental problems identified by the EPA studies. With the signing of the 1983 Chesapeake Bay Agreement by Maryland, Virginia, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission, and the EPA, a commitment was made to implement coordinated plans to improve and protect the water quality and living resources of the Bay. To initiate this effort, federal funds earmarked for Bay implementation actions and long-term resource management became available during 1984.

In 1984, the Maryland General Assembly enacted a unique environmental program with major financial commitment to carry out the Chesapeake Bay Agreement. The general goal of this program is to restore the Bay to the condition that existed in the 1950s. To accomplish this goal, the program is designed to improve the quality of the Bay and the management of its resources by controlling pollution, restoring aquatic and land resources, and protecting shorelines from erosion and sediment runoff.

In terms of State law that existed prior to 1984, the following major statements of policy relating to protection of the State's waters still apply today (as taken from the Annotated Code of Maryland):

- “...it is State policy to improve, conserve, and manage the quality of the waters of the State and protect, maintain, and improve the quality of waters for public supplies, propagation of wildlife, and domestic, agricultural, industrial, recreational, and other legitimate beneficial uses. Also, it is State public policy to provide that no waste is discharged into

the any waters of this State without first receiving necessary treatment or other corrective action to protect the legitimate beneficial uses of this State's waters, and provide for prevention, abatement, and control of new or existing water pollution.

- Many of the rivers of Maryland or portions of them and related adjacent land areas possess outstanding scenic, fish, wildlife, and other recreation values of present and potential benefit to the citizens of the State. The policy of the State is to protect the water quality of these rivers and fulfill vital conservation purposes by wise use of resources within the scenic river system.
- The General Assembly finds that the management of stormwater runoff is necessary to reduce stream channel erosion, pollution, siltation and sedimentation, and local flooding, all of which have adverse impacts on the water and land resources of Maryland.”

In addition, Maryland’s Governors have issued executive orders that declare goals and policies for environmental management, including water quality protection. An example of this is the order that contains policies to guide State actions for physical and economic development. With respect to water quality, the order states:

...it is State policy to protect the quality and productivity of the Chesapeake Bay, its tributaries, and other water bodies of the State, and groundwater resources.

The 1997 General Assembly adopted several specific programs, which form the **Smart Growth Initiatives**. Collectively, these initiatives aim to direct State resources to revitalize older developed areas, preserve some of Maryland’s valuable resource and open space lands, and discourage the continuation of sprawling development into our rural areas. The *Smart Growth* legislation allows the State to direct its programs and funding to support locally-designated growth areas and protect rural areas. This landmark legislation’s passage is a significant accomplishment, which will play a major role in Maryland’s efforts to better manage land use and growth.

The Maryland General Assembly passed the Water Quality Improvement Act (WQIA) of 1998 during the closing hours of the session. The WQIA of 1998 offers many challenges for agricultural and environmental interests in Maryland. It represents a major change in MDE’s approach to controlling agricultural nutrient pollution. The most far-reaching requirement of the WQIA is that all agricultural operations with annual incomes greater than \$2,500 or more than eight animal units (one animal unit equals 1,000 pounds live weight) must have and implement a nitrogen- and phosphorus-based nutrient management plan by a prescribed date. The Act requires that anyone “who in operating a farm, uses chemical fertilizer” must have a nitrogen- and phosphorus-based plan by December 31, 2001, which must be implemented by December 31, 2002. With regard to persons using sludge or animal manure, they have until July 1, 2004, to submit a nitrogen- and phosphorus-based nutrient management plan, which must be implemented by July 1, 2005.

Lastly, State agencies can adopt policy statements and develop strategies that, although lacking the legal strength of State law or regulation, can have a major influence over the actual implementation of

State programs affecting water management.

2.2 PROGRAM GOALS OF THE STATE'S CONTINUING PLANNING PROCESS

In response to federal directives and existing State laws and policies, Maryland has framed current program goals as part of the Continuing Planning Process for water quality planning and management. These goals, listed below, address the major water quality issues that underlie the State's central water quality program:

- Goal 1** **Water Quality Standards:** Maintain a set of water quality standards that provide for the protection of public health and aquatic life and support the goals established by federal and State law.
- Goal 2** **Comprehensive Watershed Management:** Maintain a program of comprehensive water quality planning and management for each of the major river basins in the State.
- Goal 3** **Chesapeake Bay Program:** Direct and enhance State water quality program efforts in support of the Chesapeake Bay Agreement. Maximize the use of federal resources available for Bay cleanup efforts.
- Goal 4** **Point Source Pollution:** Ensure levels of wastewater treatment that will allow compliance with established water quality standards and will permit attainment of recognized beneficial uses for the State's waters. Ensure adequate conveyance facilities for sewage, allowing for present and future needs (see the discussion at the end of this Section on Point Source Pollution).
- Goal 5** **Nonpoint Source Pollution:** Support the continued enhancement of an integrated strategy to adequately address nonpoint sources of pollution with stronger emphasis on the mitigation of nutrient enrichment of the State's waters (see the discussion at the end of this Section on Nonpoint Source Pollution)..
- Goal 6** **Water Supply:** Ensure the provision of adequate supplies of high quality drinking water for the citizens of the State. Ensure adequate treatment and distribution facilities, allowing for present and future needs.
- Goal 7** **Groundwater:** Ensure adequate protection of the State's groundwater resources.
- Goal 8** **Aquatic Resources:** Support the restoration or creation of viable communities of diverse aquatic plant and animal species through the application of appropriate water quality standards and subsequent control of recognized pollutants.
- Goal 9** **Research:** Further develop a research program that addresses both short-range and

long-range water quality issues for which State policies, programs, and regulatory actions are needed.

- Goal 10 Monitoring and Database Management:** Maintain a compliance and water quality monitoring program, and a database management program, to be used to store and analyze data that will allow the State to effectively: (1) protect public health; (2) characterize the general quality of the State's waters; (3) develop wasteload allocations for discharges to specific waterbodies and ensure compliance with State water quality management strategies and policies; and (4) evaluate effectiveness of management program.
- Goal 11 Special Water Quality Problems:** Investigate special water quality problems and, when necessary, develop management programs to address those problems. An example of "Special Water Quality Problems" is the *fish kill* episode in Pocomoke River due to the presence of potentially toxic estuarine microorganism *Pfiesteria piscicida*¹
- Goal 12 Local Government and Public Involvement:** Encourage meaningful involvement of the public in water quality management issues and in local cleanup efforts. Provide for cooperation with and support of local environmental programs impacting water quality. Local government and public involvement issues are further discussed in Sections 3.9 and Chapter 4.0 respectively.

Discussion on Point and Nonpoint Source Pollutions

Point Sources: Point sources are managed by MDE through the issuance of a written permit, which describes the characteristics of what may be discharged by the point source. There are a variety of different categories of permits, briefly described below. Most of these point source permits are more formally known as federal National Pollutant Discharge Elimination System (NPDES) discharge permits.

Point sources of certain well-defined types, such as the specific industry categories of mining, seafood processing, and others may receive a "general permit." A general permit specifies uniform rules by which all point sources of a certain type are to manage their discharge.

Other point sources, for which it has been determined that a discharge will not adversely affect water quality, may receive technology-based permit requirements. These permits include limits which require appropriate technology-based controls for various industrial processes or municipal waste, required by Sections 301(b), 306, 307, or other Sections of CWA.

¹ Beginning in October 1996, and again in the spring and summer of 1997, fish with unusual and disturbing deep, bloody lesions were reportedly being taken from the Pocomoke River, located on Maryland's lower Eastern Shore. *Pfiesteria* was identified as the cause of the problem. More information can be found in MDE's website (www.mde.state.md.us/reference/factsheets/pfiesteria.html).

If effluent-based control limits are insufficient to assure that water quality standards will be met in the receiving water body, water quality-based effluent limits are also necessary. These limits are tailored with respect to the receiving water body to which the point source will discharge.

Nonpoint Sources: In part, due to their diffuse nature, nonpoint sources are managed through a wide array of regulatory and non-regulatory means. The state has formed innovative partnerships with the federal government, neighboring states, local governments, private businesses and the public to improve watershed health. Major watershed initiatives include: the Chesapeake Bay Program, the Anacostia River Initiative, the Coastal Bays Program, the Susquehanna River Basin Commission, the Interstate Commission on the Potomac River Basin and the Chesapeake Bay Critical Area Program.

The Maryland Department of Natural Resources (DNR) oversees the State's nonpoint sources pollution control planning process. More information describing Maryland's framework for managing nonpoint sources of pollution may be found in a document entitled "Maryland's Nonpoint Source Management Plan (MNPSMP)," developed in response to the Section 319 of the CWA and Section 6217 of the federal Coastal Zone Act Reauthorization Amendments of 1990. The MNPSMP was approved by EPA in April 2000. The Statewide MNPSMP Update is a comprehensive guide to the State's nonpoint source problems, pollution control programs, and future step for nonpoint source pollution control and prevention. This Plan updates the "Nonpoint Source Pollution Management Program," prepared in April 1989. Maryland assembled this document in accordance with guidance contained in the *Nonpoint Source Program and Grants Guidance for Fiscal Year 1997 and Future Years* and the *Final Administrative Changes to the Coastal Nonpoint Pollution Control Program Guidance*. The document was developed to comply with the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA) requirements, but was also written for the public to describe what is being done in Maryland to control or prevent nonpoint source pollution. The report is broken down into six chapters: Introduction, Resource Assessment and Monitoring, Watershed Management Programs and Initiatives, NPS Programs and Initiatives, Public Outreach and Assistance Programs, and Future Directions. The NPS Programs and Initiatives chapter is the core component of the MNPSMP document. This chapter is divided into the following nonpoint source pollution categories: agriculture, developed lands, forestry, marinas and recreational boating, hydromodification, wetlands, atmospheric deposition, and mining.

Maryland's Nonpoint Source Management Plan Update was developed by Nonpoint Source Program staff in close cooperation with State and local nonpoint source program managers. Throughout the entire process these program managers were consulted so that the Management Plan contains the most current information on nonpoint source pollution control programs and their long and short term goals. The entire text version of this document can be found in DNR's website (www.dnr.state.md.us/bay/czm/nps)

2.3 COORDINATION OF MARYLAND'S WATERSHED RESTORATION AND PROTECTION INITIATIVES

In developing the Chesapeake Bay Agreement and working to achieve their commitments under that agreement and subsequent directives of the Chesapeake Bay Executive Council (CEC), Maryland and the other signatory jurisdictions have built upon ongoing efforts, including both voluntary programs and legally mandated regulatory programs. Likewise, in developing its Clean Water Action Plan (CWAP), Maryland has endeavored to build upon ongoing efforts such as the Chesapeake Bay Agreement, and Clean Water Act mandated environmental monitoring, assessment and regulatory efforts. This has led to some confusion regarding the apparently overlapping goals and mandates of CWAP, Chesapeake Bay Agreement commitments, and Clean Water Act mandates, most notably with regard to Total Maximum Daily Load (TMDL) requirements. This Section of Maryland's CPP defines each of those programs and then describes how they are related to each other.

2.3.1 Clean Water Action Plan

The Clean Water Action Plan was unveiled by President Clinton in February 1998. The Action Plan proposes a new collaborative effort by state, federal, and local governments, the private sector and the public to restore those watersheds not meeting clean water and other natural resource goals and to sustain healthy conditions in watersheds that currently meet these goals. The Clean Water Action Plan addresses all aspects of watershed condition: water quality, including public health issues; aquatic living resources; physical habitat and the landscape. The key steps in this national effort are:

- **Unified Watershed Assessment** - The Unified Watershed Assessment (UWA) uses the best available information to assess the condition of each State's watersheds, identify watersheds in need of restoration, identify watersheds that need preventive action to sustain water quality and aquatic resources, and identify pristine or sensitive watersheds that need extra protection
- **Watershed Restoration Priorities** - Based on the UWA, States will establish watershed restoration priorities by October 1998. This involves selecting those watersheds not meeting clean water and other natural resource goals that are most in need of restoration actions during the next two years.
- **Watershed Restoration Action Strategies** - will identify the most important causes of water pollution and resource degradation, detail the actions needed to address these problems, and set milestones by which to measure progress. Funds made available to federal agencies through the federal FY 1999 Clean Water and Watershed Restoration Budget Initiative will be used to help States implement these strategies.

This report "Maryland Clean Water Action Plan" (December 31, 1998 describes Maryland's Unified Watershed Assessment, Watershed Restoration Priorities and the process to develop and implement Watershed Restoration Action Strategies. It was prepared by the Maryland Clean Water Action Plan Technical Workgroup² and subject to policy review by a group including Maryland's Chesapeake Bay Cabinet Secretaries and the Maryland Natural Resource Conservation Service State Conservationist. Comments received from other local governments, State and federal agencies, interest

² The workgroup included a diverse group of interests: State agencies, local governments, Tributary Teams, environmental and watershed organizations, the Farm Bureau and others.

groups and the public based on draft reports produced in August and October 1998 were considered in this revision of the report. Also, public comments received through mid-October and comments received during six regional workshops held in cooperation with the Tributary Strategies Teams in September 1998 were considered.

Clean Water Action Plan is a comprehensive federal initiative begun in 1998 and designed to encourage all 50 states to assess their watersheds and develop restoration and protection action strategies to meet the specific water quality goals defined in the Clean Water Act, as well as other natural resource objectives. These are to be achieved by applying a combination of voluntary programs and legally mandated regulatory programs intended to restore and protect water quality, living resources and the watersheds on which they depend. CWAP recognizes the need for all of the states and federal government agencies to fully comply with all of the legally mandated provisions of the Clean Water Act. The CWAP attempts to bring these efforts together to comprehensively address the need for water quality management and watershed restoration and protection. CWAP is national in scope, is implemented on a state-by-state basis, and includes both water quality and living resources components for tidal and non-tidal waters. It provides federal funds for watershed restoration and assessment.

2.3.2 Restoration of Watershed Impacted by Acid Mine Drainage

Acid Mine Drainage is Maryland's most serious problem attributable to abandoned coal mines, and Western Maryland's most severe water pollution problem. Acidic waters from abandoned coal mine drainage or from atmospheric deposition in headwater streams have detrimental effects on aquatic life by smothering aquatic habitats with precipitates or through the toxic effects of low hydrogen ion concentration (pH) and high metal concentrations. The extent of many underground workings in Western Maryland made Acid Mine Drainage remediation exceedingly difficult to accomplish.

After World War II, deep mining activity declined and surface coal mining increased in Western Maryland. Surface mines operated without any reclamation laws until 1955, when minimal requirements, far from satisfactory by today's standards, were enacted. As surface mining increased, new types of abandoned mine problems emerged. Highwalls, pits with standing water, spoil piles, landslide areas, erosion, and acid drainage are prevalent remnants of the abandoned surface mine problems in the coal basin of Western Maryland.

In 1967 and 1969 major changes in the Maryland Strip Mining Law were enacted. Further amendments were enacted in 1972, and annually since 1974, as reclamation requirements began to resemble current regulatory program standards. More information acid mine drainage can be found in MDE's website (www.mde.state.md.us/wma/minebur).

2.3.3 Maryland Coastal Bay Program (MCBP)

On October 13, 1999, the Coastal Bays Comprehensive Conservation and Management Plan was approved by the EPA and is summarized in the following paragraphs. More information on MCBP can be found at DNR's website (www.dnr.state.md.us).

The Maryland coastal bays, like other coastal areas around the world, are experiencing rapid population growth and increased development. Already the bays are experiencing early warning signs of stress. Recognizing the potential for additional stress on this fragile ecosystem and the importance of a healthy ecosystem, federal, state and local government agencies joined with the people who depend on these resources for their livelihood and quality of life to develop a plan of action that will protect and restore the health of the coastal bays. The MCBP is one of 28 National Estuary Programs designated by the EPA. The MCBP has identified changes in living resources, deteriorating water quality, loss and modification of habitat, increasing chemical contamination, impacts of water based activities, and pathogen contamination as priority issues threatening the coastal bays.

There were four broad goals that the Maryland Coastal Bays Program used when developing solutions, or action plans, to address the six priority environmental problems identified for the coastal bays. These goals include:

- Improve the overall water quality by reducing the causes of eutrophication, and maintain the water quality in relatively unimpacted areas such as Chincoteague Bay.
- Protect existing habitat, restore degraded habitat and create new habitat to improve the reproduction and maintenance of healthy living resource populations.
- Assess the impact of pathogens and toxic chemicals on living resources and control and/or mitigate those impacts.
- Promote ecologically sound, sustainable development in order to protect the desired uses and economic vitality of the coastal bays region.

2.3.4 Maryland's Source Water Assessment Program

The 1996 Safe Drinking Water Act Amendments require states to develop and implement source water assessment programs to evaluate the safety of all public drinking water systems. States are required to develop these programs with public input and to submit draft descriptions of their programs to the federal Environmental Protection Agency (EPA) by February 1999. The draft submittals must outline the methods that each state will use to define and evaluate risks to each public drinking water system. States must complete the assessments by May of 2003.

Source Water Assessment is a process for evaluating the vulnerability to contamination of the source of a public drinking water supply. The assessment does not address the treatment processes, or the storage and distribution aspects of the water system, which are covered under separate provisions of the Safe Drinking Water Act. There are three main steps in the assessment process: delineating the drainage area that is likely to contribute to the drinking water supply, identifying potential contaminants within that area and assessing the vulnerability of the system to those contaminants. Maryland will look at many factors when determining the vulnerability of a water supply to contamination, including the size and type of water system, the characteristics of the potential contaminants and the capacity of the natural environment to attenuate any risk. More information on Maryland's Source Water Assessment Program can be found on MDE's website (www.mde.state.md.us/health/sourcewater.html).

Washington Suburban Sanitary Commission (WSSC) is another agency that is playing a key role in water quality planning. WSSC is providing safe and reliable water, and taking care of wastewater in suburban Maryland that would include Montgomery and Prince George's Counties. All of the water WSSC processes is surface water and comes from the Patuxent and Potomac rivers. Treated wastewater is discharged in accordance with NPDES permit requirements. More information on WSSC can be found on the Internet (www.wssc.dst.md.us).

2.3.5 Chesapeake Bay Agreement

This is a regional initiative of Maryland, Virginia, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission, and the U.S. Environmental Protection Agency, initially signed in 1983. The original agreement was further strengthened by amendment in 1987 and in 1992. It focuses on the entire Chesapeake Bay Watershed, with the objective of achieving both water quality and living resources goals set by the Chesapeake Executive Council in the Bay Agreement and subsequent directives. The Chesapeake Bay Agreement is regional in scope, is implemented in a multi-state cooperative manner, and includes both water quality and living resources components.

Maryland's nutrient reduction programs (both regulatory and voluntary) are focussed on achieving the Chesapeake Bay 40% nutrient reduction goal and are on track for success. In addition to the 40% Nutrient Reduction Goal, Maryland's Tributary Nutrient Reduction Strategies and the Executive Council Directive No 97-1 (Baywide Nutrient Reduction Progress and Future Directions), which requires the development of Protocols for establishing Priority Nutrient and Sediment Reduction Areas (PN/SRAs), are closely linked to CWAP and the TMDL effort, as described in the Section 2.3.6 of this document. A revised interim cap strategy is being developed which, when completed in January 2001, will address how to maintain the 40% reduction levels.

Tributary Strategy: A Tributary Strategy is a comprehensive approach to reducing nutrient pollution in a watershed. It is developed by the state, local governments, and citizens living and working in the watershed. To achieve the 40% nutrient reduction for the state, Maryland's Chesapeake Bay³ watershed has been divided into ten major tributary watersheds (see Figure 1). These are:

- Choptank River
- Lower Eastern Shore
- Lower Potomac River
- Lower Western Shore
- Middle Potomac River
- Patapsco Back River

³ The Chesapeake Bay Watershed is the land area drained by all the rivers and streams that flow into the Bay. Home to 14 million people, it extends 64,000 square miles and includes parts of six states and the District of Columbia. Like all large watersheds, the Bay's watershed is made up of thousands of smaller watersheds that drain into its tributaries. For example, the Monocacy River Watershed is part of the larger Potomac River Watershed, which, in turn, is part of the Chesapeake Bay Watershed.

- Patuxent River
- Upper Eastern Shore
- Upper Potomac River
- Upper Western Shore

The Strategy is a combination of existing regulatory programs and comprehensive voluntary programs⁴. It includes some options we know will reduce nutrients, but don't know by how much. The Strategy is a plan for achieving the 40% nutrient reduction goal that will be fine-tuned and improved as it is implemented by the year 2000 (this year is being revised). The Strategy will reflect public, local, state, and federal government concerns, availability of resources, and the emergence of new technologies. More information on Tributary Strategies can be found in DNR website.

2.3.6 Clean Water Act and Total Maximum Daily Loads (TMDLs)

The Clean Water Act (CWA) is a federal law that was passed in 1972. It is designed to ensure the nation's waters are maintained in a "fishable and swimmable" condition that is protective of public health and living resources. Among other requirements, the CWA mandates that states establish water quality standards, regularly monitor water quality and regulate discharges to those waters to ensure water quality standards are achieved and maintained. The CWA is national in scope, and it imposes certain requirements on the states, such as the development of water quality standards and TMDLs. EPA may authorize states to implement other aspects of the CWA, such as the National Pollutant Discharge Elimination System (NPDES) permit program. Maryland is authorized to implement the NPDES permit program within its borders.

Section 303(d) of the CWA requires states to identify waters which do not meet applicable water quality standards or are not expected to meet applicable water quality standards even after the application of the technology-based effluent limitations required by Sections 301(b) and 306 of the CWA, and to establish TMDLs for those waters. TMDLs are being developed to deal with specific water quality impairments in specific water bodies. In order to assure that its TMDLs are technically and legally defensible, MDE will continue to seek information from federal, state, local and private sources in preparing TMDLs. As TMDLs are developed, they will be circulated for public review and comment before submittal to EPA for approval. Every effort will be made to coordinate the TMDLs, Tributary Strategies, and other relevant plans and objectives to make them as consistent as possible. All parties must recognize that there is a legal obligation for Maryland to develop TMDLs to meet water quality standards in impaired waters as prescribed by the Clean Water Act. This is likely to continue to

⁴ There are several voluntary programs in the state. One example of such program is *TEAM DNR*. TEAM DNR is a voluntary program with the mission of educating elementary school children about the Chesapeake Bay and other Maryland natural resource issues. Highly trained volunteers deliver hands on presentations to elementary school students around the State. Their efforts provide an important link between DNR and schools. Since the program began in 1997, TEAM DNR volunteers have reached more than 3,500 fifth grade students. TEAM DNR offers two separate classroom programs: Chesapeake Bay Watershed and Horseshoe Crabs. The presentations consist of three activities and last about 50 minutes. This service offers teachers the opportunity to enhance their Chesapeake Bay education efforts.

challenge Maryland's flexibility in meeting multiple water quality management objectives.

2.3.7 Nutrient Control Efforts

As noted above, nutrient control is a major focus of water pollution control efforts in Maryland. The linkage between the CWAP and TMDL efforts is based on the use of the Section 303(d) list of impaired waters, for which TMDLs must be developed. Specifically, the 303(d) list was used as a primary selection criterion for Maryland's CWAP Priority 1 category (watersheds in need of restoration). The TMDLs developed for these impaired waters will also be a major component of Watershed Restoration Action Strategies (WRAS), which must be developed in order for Maryland to be eligible for federal CWAP funds.

The Chesapeake Bay Agreement nutrient goals and Maryland's Tributary Strategies are a major driving force for Maryland's nutrient control efforts. The State has been working on these efforts for many years and most interested Maryland citizens are familiar with these efforts. The Tributary Teams, described in Section 2.3.5 above, will continue to play a key role in the planning and implementation of Maryland's voluntary and regulatory nutrient reduction efforts, including CWAP and TMDLs. The Protocols for Nutrient and Sediment Reduction Areas (PN/SRAs) under development by the Bay Program, will provide additional information to guide planning and implementation efforts, including future Unified Watershed Assessments and 303(d) lists of impaired waters.

2.3.8 Coordination

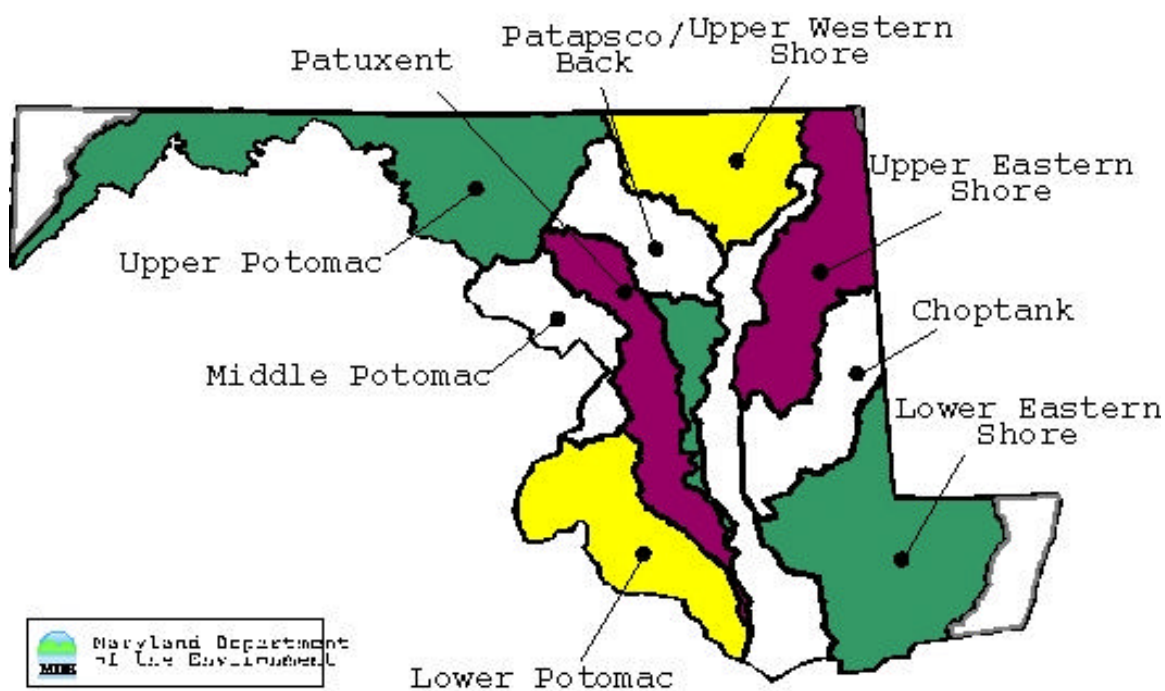
The CWAP, Chesapeake Bay Agreement, and Clean Water Act implementation are all vital components of Maryland's environmental restoration and protection strategy. They will require the cooperative efforts of all Maryland citizens if we are to be successful. Clearly, these efforts are closely related, have similar goals and approaches, and can be implemented in a coordinated manner that will strengthen all of the related programs.

Under the direction of Governor Glendening's Chesapeake Bay Cabinet, the Departments of Environment, Natural Resources, and Agriculture, the Office of Planning, and the University of Maryland work together to ensure that Maryland's environmental programs are well coordinated. Other advisory committees (State Water Quality Advisory Committee, Coastal and Watershed Resources Advisory Committee, and the Tributary Strategy Teams) play key roles in the coordination effort, bringing key stakeholders into the planning, decision-making and implementation process.

Maryland Water Monitoring Council (MWMC) was established in 1996 to foster coordination, cooperation and collaboration regarding water monitoring activities. More discussion on MWMC is presented in Section 3.3.3 of this document.

Figure 1:

Maryland's Ten Tributary Basins



CHAPTER 3.0

ELEMENTS OF THE CONTINUING PLANNING PROCESS

Chapter 3.0 of this document addresses all the required elements of the CPP (as outlined in 40 CFR 130.5, Subsections 1 through 9) individually. Each Subsection of Chapter 3.0 of this document corresponds to the individual requirement of 40 CFR 130.5 (b).

3.1 DEVELOPMENT OF EFFLUENT LIMITS AND SCHEDULE OF COMPLIANCE

40 CFR 130.5 (b)(1): The process for developing effluent limitations and schedules of compliance at least as stringent as those required by Sections 301(b)(1) and (2), 306 and 307, and at least as stringent as any requirements contained in applicable water quality standards in effect under authority of Section 303 of the Act.

“Development of effluent limits” and “schedule of compliance” are discussed individually in the subsequent paragraphs.

3.1.1 Development of Effluent Limits

The surface water discharge permit combines the requirements of the State discharge permit program and the National Pollutant Discharge Elimination System (NPDES) into one permit for wastewater treatment facilities that discharge to State surface waters.

The overall objective of the State’s *Discharge Permit* program for wastewater discharges (both municipal wastewater and industrial wastewater) is to ensure that the State’s water quality standards are not violated as a result of a single discharge or group of discharges to specific water bodies.

Within the Department of the Environment, responsibility for issuing discharge permits resides in the Water Management Administration. This Section describes the policies and procedures followed during the preparation of sewage discharge permits.

Municipal Wastewater Discharges

In order to set permit limitations for discharge of treated municipal wastewater, into water body, the State first determines the ability of a receiving body of water to assimilate certain pollutants without undergoing a water quality standards violation. The State then determines an appropriate waste load allocation (WLA) for each sewage discharge to the water body requiring a permit. Water quality-based parameters (such as biochemical oxygen demand, commonly known as BOD) are used while determining WLA. The WLA reflects the loading limitations that are necessary to ensure that the total assimilative capacity of the waterbody will not be exceeded.

The State applies a WLA process to each sewage discharge requiring an NPDES permit. The Division of Permits is responsible for conducting the WLA process. Division staff applies a variety of techniques to carry out this process. Mathematical models take into account, ambient water quality conditions, existing upstream and downstream discharges, and nonpoint source contributions where appropriate. The results of bioassays, statistical testing and benefit-cost analysis may also be considered. Discharge permit limitations must allow water quality standards to be achieved or maintained under “worst” case conditions. These conditions are defined as those occurring during a consecutive seven-day period of low water flow which occur statistically only once every ten years.

Based on the outcome of the WLA analysis, a determination is made as to whether treatment beyond secondary treatment (see foot note α) removal of pollutants is necessary to achieve or maintain water quality standards. If this is not necessary, then the discharge permit limitations are those associated with the application of secondary treatment technology. In cases where standards cannot be met with secondary treatment, limitations that are more restrictive must be determined. These more restrictive limitations are based on WLA that are generally applied to pollutants which readily decay and have the potential to affect DO concentrations, including total Kjeldahl nitrogen (TKN) and BOD. The extent of eutrophication in the receiving body is also considered and, when it is determined to be appropriate, a WLA for phosphorus is developed.

Waterways in which ambient water quality conditions necessitate the application of discharge limitations more restrictive than those associated with secondary treatment are said to be “water quality limited” with respect to additional wasteloads they may receive. Waters capable of assimilating secondary effluent are called “effluent limited” because the characteristics of the effluent, rather than existing water quality, dictate acceptable limitations. These terms reflect the evolution of the field of water pollution control from one that originally emphasized technological practicality to one that involves more sophisticated assessment of water quality impacts. In Maryland, it is important to note that all NPDES permit limitations for sewage discharges are subject to a water quality impact analysis.

The determination of WLA for freely flowing streams is technically well established. However, the physical and chemical behavior of estuarine waters is considerably more complex and not nearly as well understood. Therefore, determining WLAs for discharges to estuarine waters is still very much evolving. The WLA procedure for discharges to any waters of the State is always subject to refinement as more knowledge of water quality impacts is gained. (The Division of Permits maintains a “Procedures Manual for the Determination of Effluent Limits” as a technical reference document).

Nitrogen, as a nutrient, is specifically considered in the nutrient reduction strategies developed for the Maryland tributaries, and reduction goals are included in the permits of major facilities that have received state funding to implement biological nutrient removal (BNR).

α Secondary treatment is the federally mandated minimum level of treatment for sewage discharges

In addition to these standard constituents, if a publicly owned treatment work (POTW) receives industrial waste that contains certain toxic compounds, permit limitations for these toxic compounds may be required. With respect to toxics, the State has a biomonitoring (Whole Effluent Toxicity or WET testing) project designed to determine the degree of toxicity of selected sewage effluents that contain industrial waste components. (See also the explanation of Maryland's Industrial Pretreatment Program).

Industrial Wastewater Discharges

Within the Department of the Environment, the responsibility of issuing industrial discharge permits resides in the Water Management Administration (WMA). This Section describes the policies and methodologies followed during preparation of industrial discharge permits.

The process for developing discharge permits for industrial wastewater depends on the quality of the receiving waters. Where the receiving water body meets or exceeds water quality standards, permit limitations based on the limits of technology are developed. There are two general approaches for developing technology-based limits for industrial permits: national effluent guidelines (EGLs) and best professional judgement (BPJ)⁵. National EGLs are developed by EPA based on the demonstrated performance of a reasonable level of treatment that is within the economic means of specific categories of industrial facilities. Where national EGLs have not been developed, the same performance-based approach is applied to a specific industrial facility based on the permit writer's BPJ. In either case, the intent of a technology-based limit is to require a minimum level of treatment for industrial point sources based on an appropriate treatment technology while allowing the discharger to use any available control technique to meet the limitations.

This paragraph explains the BPJ process (in the event EPA has not established an EGL). If the permit being prepared is a renewal of an existing permit, then discharge monitoring report data are available to characterize the effluent. In instances where the receiving water is effluent-limited as opposed to water quality - limited, statistical analysis may be performed to establish a long-term average of the effluent concentration and a measure of the variability. From this information, the 95th percentile of the effluent concentration of specified concentration may be used as the average permit limitation. Twice this value is used as the daily maximum permit limitation. Another approach employed is to examine EGL information which is either not promulgated or remanded, or evaluate EGLs from a similar industry. If the data indicate that the waste streams are similar, and that the appropriate technology is applicable to the industry under consideration, then the proposed EGL may be used to develop effluent limits. An example of the former situation is the use of proposed EGLs in the development document for poultry processing as the basis for establishing limits for a chicken processing plant. An example of the latter category is the use of coal mining EGLs (40 CFR Part 434)

⁵ The EGLs are employed whenever applicable. However, many of the discharges, which are permitted, do not fit into any of the categories for which EGLs are available. In these instances, a variety of other approaches are applied to develop effluent limits for inclusion in the permit. Collectively, this approach is known as *best professional judgement (BPJ)*.

to establish limits on total suspended solids and iron at sediment pond discharges resulting from fly ash storage sites. In other words, if EPA has established an EGL, that would apply.

If imposition of a technology or performance-based limit discussed above will cause impairment of water quality, then a more stringent water quality-based limit is applied using applicable water quality standards. Limits are chosen so that the discharge will not impair water quality or so that in-stream concentrations outside of the mixing zone do not exceed applicable EPA water quality criteria or State water quality standards. This is determined by evaluating stream flow, effluent flow, upstream or background levels for the pollutant of concern, and levels of the pollutant in the discharge.

Where an industrial discharger discharges to a receiving water body that is not meeting water quality standards, the state develops effluent limitations designed to achieve them. Like the effluent limitations for municipal discharges previously described, these water quality-based limitations are derived from the total assimilative capacity of the water body for the pollutant at issue.

Several different levels of treatment are specified in the Clean Water Act. Best available technology (BAT) is required for all non-conventional pollutants and best conventional technology (BCT) is required for conventional pollutants.

For new sources, new source performance standards (NSPS) provide limits. If the wastewater is discharged to a publicly owned treatment work, then either pretreatment standards for new sources (PSNS) or existing sources (PSES) provide the appropriate requirements. In some industrial categories, BCT is not available. In these cases, best practicable technology (BPT) is used to establish limits for conventional pollutants.

Whole Effluent Toxicity (WET) testing may be used in conjunction with any of the techniques discussed above in developing permit requirements. This involves the use of an EPA test procedure for indicating toxicity of a whole effluent, which is a mixture of various components with potential synergistic and/or antagonistic effects on an aquatic environment. All major industries are required to perform WET tests as a permit condition and to submit the results to the Department. Where toxicity has been found, the permittees have been required to follow EPA guidance to conduct Toxicity Reduction Evaluations to determine and eliminate the cause of the toxicity. In addition, through contractual arrangement, the Department has operated its own WET testing laboratory to independently test industrial effluents since 1987.

3.1.2 Schedule of Compliance

Compliance schedules are required in circumstances where a discharge is not currently achieving permitted effluent limits. The compliance schedule establishes enforceable milestones throughout the process to achieve the limitations set forth in the permit within the period of the permit. Because design, procurement, and installation of an improved treatment system requires time, interim period must be allowed during which the treatment system is put into place. The compliance schedule establishes enforceable milestones throughout the process to achieve final limitations. Interim effluent

limitations, which are less restrictive than the final limitations, may be established based on the State's determination on the highest capability of an existing treatment system. The NPDES permit for a given facility in this case would include: 1) the final effluent limitations, 2) the interim effluent limitations, and 3) the compliance schedule for achieving the final limitations. NPDES permits are typically issued for a maximum five-year period.

In addition to the development of permit limitations and schedules of compliance for both public and private sewage facilities, the State performs several other tasks related to both short and long-range pollution control activities. The Water Management Administration is responsible for providing effluent limitations for twenty-year planning efforts associated with the sewage construction grants program. This same unit also conducts advanced waste treatment reviews in accordance with the State's facility planning delegation agreement.

For industrial discharges, where EGLs are used to establish permit limits at the BAT level, compliance schedules cannot be made part of the discharge permit. The Clean Water Act specifies that BAT must be applied no later than July 1, 1984. For a permit issued after that date, BAT must be required immediately. If a compliance period is necessary, the compliance schedule must be contained in a consent agreement that is issued concurrently with the discharge permit.

3.2 INCORPORATING SECTIONS 208 AND 209 of CWA

40 CFR 130.5 (b)(2): The process for incorporating elements of any applicable areawide waste treatment plans under Section 208, and applicable basin plans under Section 209 of the Act.

Over the past year, hundreds of concerned citizens, businessmen and government staff have worked together to select a menu of "nutrient reduction options" for use in the Tributary Strategies. These include regulatory and voluntary programs, new directions for state and local governments and non-governmental activities.

There are 17 major wastewater treatment plants in Maryland removing nitrogen. Eight of these plants are in the Patuxent watershed where much of the effort toward point source reduction has been directed. The Strategies call for an additional 47 major treatment plants to be upgraded for nitrogen and phosphorus removal; 33 of these plants have entered into agreements with MDE to begin nitrogen removal (More information can be found in *Restoring the Chesapeake – Chesapeake Bay Progress Report, 1995*).

With regard to basin plans (Section 209 of CWA), Maryland has initiated several studies. An example is the studies conducted by the Tributary Teams on ten watersheds (also see Section 2.3 of this report). Tributary teams formed in each of ten watersheds are made up of representatives of state and local agencies, farmers, businesses, environmental organizations, federal facilities, and citizens. More information on the studies can be found at DNR website.

In summary, all applicable elements of Sections 208 and 209 of CWA (with regard to waste treatment plants and basin plans respectively) have been incorporated in Maryland's existing water quality plans.

3.3 DEVELOPING TOTAL MAXIMUM DAILY LOADS (TMDLs) AND WATER QUALITY BASED EFFLUENT LIMITS

40 CFR 130.5 (b)(3): The process for developing total maximum daily loads (TMDLs) and individual water quality based effluent limitations for pollutants in accordance with Section 303(d) of the Act and § 130.7(a) of this regulation.

3.3.1 Purpose

The purpose of this Section is to describe the procedures associated with Maryland's Total Maximum Daily Load (TMDL) program, and how the approved loads are incorporated into the State's Water Quality Management Plans (WQMPs) and National Pollutant Discharge Elimination System (NPDES) Wastewater and Industrial Discharge permits. This Section is organized in the following manner. Section 3.3.2 provides the reader with some contextual background. Section 3.3.3 provides an overview of the State's water quality monitoring program. Section 3.3.4 provides an overview of the State's process for preparing the biannual water quality inventory report required under Section 305(b) of the Clean Water Act (CWA). Section 3.3.5 describes the State's process for revising the *List of Impaired Waters* (Section 303(d) of CWA). It also describes how priorities and TMDL development schedules are determined for waters identified in the 303(d) List, and describes the process of public involvement, and submittal for EPA approval. Section 3.3.6 provides an overview of the process by which TMDLs are established in Maryland, including the load allocation process, and the process of public involvement, and submittal for EPA approval. Section 3.3.7 provides an overview of the State's process for incorporating TMDLs into State's WQMPs, in which Maryland will maintain lists of EPA-approved TMDLs. Section 3.3.8 provides an overview of the State's process for incorporating approved loads into NPDES Wastewater and Industrial Discharge permits. In accordance with 40 CFR 130.7, Maryland recognizes that public participation is an important element in the TMDL process. Public participation is discussed separately in Chapter 4.0 of this document.

3.3.2 Background

The federal CWA requires all states to monitor and maintain an inventory of the quality of their waters. For waters that remain impaired, even after all required technologies have been implemented, states are required to calculate a TMDL, which among other things, requires the state to determine the water's maximal capacity to withstand an impairing substance or stressor, and still meet the water quality standards and to allocate that load among sources.

In cases for which the establishment of a TMDL is necessary, additional steps are taken to

attain the goals of the TMDL, and thereby achieve and maintain water quality standards. These additional controls can be categorized into two general classes: (1) controls for point sources of pollution (typically defined as pollution that comes from the end of a pipe); and (2) controls for the remaining nonpoint sources of pollution (typically defined as diffuse sources of pollution). A *Margin of Safety* also is required. The general framework by which both point sources and nonpoint sources are addressed after the establishment of a TMDL is expanded upon in Section 3.3.7 of this document.

The remainder of this Section describes the key procedures associated with Maryland's TMDL program, and how the approved loads are incorporated into the State's WQMPs and NPDES Wastewater and Industrial permits.

3.3.3 State Water Quality Monitoring Programs for Assessing the Waters of the State and for Establishing TMDLs

The State's water quality monitoring strategy is designed to integrate information from many sources of water quality data, including local governments, academic institutions and others (See: *Maryland's Water Quality Monitoring Strategy*, prepared by the DNR). Strictly speaking, the "State water quality monitoring programs" represent a subset of this holistic monitoring strategy. The responsibility for the overall coordination and documentation of Maryland's Water Quality Monitoring Strategy lies with the DNR. Due to the many regulatory requirements for water quality monitoring, for which the MDE is responsible, MDE and DNR have shared responsibilities in planning, documenting, and executing the monitoring strategy. Coordination with non-State entities is conducted through the Maryland Water Monitoring Council (MWMC)⁶. The monitoring strategy is reevaluated every five years to ensure updated and accurate information.

It should be understood that, although the Maryland DNR serves a coordinating role for water quality monitoring, water quality monitoring by the State of Maryland is achieved via many monitoring activities, which are of necessity spread among many different functional programs in State government. A joint responsibility of DNR and MDE is to assure that the State's water quality monitoring strategy achieves minimum statutory and regulatory requirements. Because of these requirements, the State water quality monitoring programs must assure that sufficient water quality data is generated to enable the comprehensive assessment of the waters of the State. State water quality monitoring programs also must generate sufficient water quality data to enable the development of technically defensible TMDLs.

The remainder of this subsection briefly describes the process by which water quality monitoring in Maryland supports the development of the State water quality inventory report (Section 305(b) Report), and the State list of impaired waters (Section 303(d) List). In addition, the monitoring framework used to generate sufficient water quality data to support the development of TMDLs is described. Descriptions of other water quality monitoring programs of the State are described or

⁶ MWMC was established to help achieve effective collection, interpretation, and dissemination of aquatic resource monitoring data used in addressing issues, policies, and management of the State's waters. Sponsorship was formally approved by the DNR in 1996.

referenced in the *Maryland Water Quality Monitoring Strategy* (Maryland DNR).

Additionally, the report *Maryland Water Quality Inventory*, revised every two years by the DNR (pursuant to Section 305(b) of the CWA), also discusses water quality monitoring programs in the State. This inventory is commonly known as 305(b) Report⁷. The State employs a variety of monitoring programs designed to assess the status of ambient water quality conditions, determine the presence of trends, seek associations between water quality and various anthropogenic stressors, and evaluate specific water quality problems. State's monitoring programs are classified into the following categories:

- long-term ambient monitoring
- intensive monitoring
- estuarine monitoring

The process of determining impairments for the 303(d) List begins with Maryland's 305(b) Report. Not all of the impairments identified in the 305(b) Report constitute a water quality limited segment requiring the development of a TMDL under Section 303(d) of the CWA. Methodologies for determining impaired waters for the 303(d) list are described in *Water Quality Limited Segments (WQLS)* – the package (commonly known as “303(d) List Submittal Package”) submitted to EPA by MDE in 1998.

As mentioned earlier Total Maximum Daily Loads (TMDLs) are required, by §303(d), of the federal Clean Water Act (CWA). Pursuant to this Section and implementing federal regulations (40 CFR 130), Maryland prepared a list of impaired waters (commonly known as the 303(d) list). The list is made available for public review and is subject to the approval by the EPA.

A subset of the State's data collection effort, designed to support TMDL development, is being conducted by the MDE within *Maryland's Watershed Cycling Strategy* framework. According to this framework, the State is divided into five regions so that intensified water quality management resources can be targeted to the regions in a systematic manner. Briefly, for a given region, the cycle begins with the water quality monitoring and other collection of data in the initial year, followed by TMDL development, which is used to support watershed-based permitting in subsequent years.

Various activities under *Maryland's Watershed Cycling Strategy* are briefly discussed in the next few paragraphs.

Maryland's Watershed Cycling Strategy

As explained above, the Maryland Department of the Environment (MDE) is implementing a watershed-based permitting system. To facilitate this, MDE had developed a watershed cycling framework in which the State is divided into five regions (Figure 2). Water quality management

⁷ Also see Section 3.3.4 of this document for further discussion on 305(b) process.

activities will be cycled through those regions over a five-year period. This approach allows a significant amount of resources to be concentrated in 20% of the State at any given time, thereby increasing both the efficient use of resources and the intensity of water quality evaluations. Based on this study, permits are reissued every five years.

Historically, permits in the same watershed have been issued in different years, because the initial permit issuance dates differed. Maryland is currently in a transition period, after which permitting activities in the same watershed will be conducted simultaneously. Under the watershed cycling strategy, each five-year cycle begins with intensive monitoring, followed by the development of TMDLs where necessary, followed by the watershed-based permitting and other implementation activities (Figure 3). Because the watershed cycle is repeated, this approach ensures that the effectiveness of the implementation activities will be evaluated by field monitoring.

In a given year, the watershed cycling strategy concentrates approximately 80% of MDE's available resources for field work in approximately one-fifth of the State (i.e., one of the five watershed regions). This field work entails water quality monitoring, pollutant source assessment, and collection of other physical parameters to support TMDL modeling and the establishment of NPDES permits. The remaining 20% of MDE's monitoring resources are reserved for high-priority TMDL work and immediate NPDES permitting needs that fall outside of the watershed region. According to the strategy, complete coverage of the State for these important water quality management activities will occur in five-year cycle. This approach is supported by the EPA.

After monitoring is completed in the watershed, data assessment and TMDL development will occur. At that time, the monitoring resources will be shifted into the next watershed. The assessment will entail data validation to assure quality of the information, data processing and interpretation to characterize the problem, and data processing to create computer model input files.

During TMDL development an appropriate model will be developed and applied to quantify the feasible controls expressed in terms of the maximum pollutant load or stress, and the establishment of allocations between point and nonpoint sources. The TMDL development step in the cycling strategy also involves TMDL documentation and TMDL adoption through a formal public process.

After the establishment of TMDL, additional planning of implementation steps is necessary. According to the cycling strategy, these detailed implementation planning activities are envisioned to begin following the establishment of the TMDL. The implementation process will depend on the type of TMDL. In general, implementation will involve identification of specific pollution reduction controls that are needed to meet TMDL goal, and the establish administrative procedures for state and local environmental management programs, which will ensure the TMDL limit is maintained. It is within this cycle of the watershed cycling strategy that additional public outreach will be conducted.

3.3.4 State Water Quality Inventory: Section 305(b) Report

In accordance with Section 305 (b)(1) of the CWA, the State is required to prepare water

quality report biennially to provide information to the EPA and the Congress about water quality conditions in the State and the status of State efforts to meet the goals of the federal law. The most recent report “1998 Maryland Section 305 (b) Water Quality Report,” prepared in December 1998, provides summary information on surface and ground water quality conditions in Maryland and identifies water quality impairments and the known or probable cause and sources of these impairments Statewide. The State’s surface and ground water pollution control programs, monitoring strategy and programs, and special State concerns are also described in this document.

3.3.5 State List of Impaired Waters: Section 303(d) List

Section 303 (d) of the CWA and its amendments require States to identify and prioritize waters for which technology-based effluent limits required by Sections 301(b) and 306 of the CWA are not stringent enough to meet water quality standards. For each of these “water quality-limited segments,” the State must determine the maximum level of any impairing pollutant that can be borne in the water without causing violations of established water quality standards. By calculating this maximum pollutant load, then allocating the load among various sources (both point and nonpoint), water quality standards should be met. Following is the process involved as described in 303(d) list⁸:

- Watersheds in question are organized by their names and respective logical code numbers
- Watersheds are classified into categories such as, tidal or impoundment
- Watersheds are exactly identified with respect to their latitude and longitude
- This list also indicates the suspected substance(s) that would make the watershed impaired (for example, nutrients, heavy metals, or coliform bacteria)
- This list identifies the possible source of this substance in water (point or nonpoint source)
- In terms of finding the solutions to the current problems, these watersheds have been prioritized, such as *High, Medium or Low*

MDE is the lead agency for the State’s TMDL Program and most regulatory water quality programs. MDE updates Maryland’s list of water quality-limited segments [303 (d) list] from time to time as required by the applicable EPA regulations, using data from the 305 (b) report with other existing and readily available information. The protocols and decision criteria associated with the development of the 303 (d) list are currently under review by an interagency workgroup made of staff from MDE, DNR, the Department of Agriculture, Department of Transportation, the Office of Planning, and University of Maryland. More information on 303(d) list can be found at MDE website.

Across the State, there are approximately 130 rivers, streams, lakes, reservoirs and estuaries that are impaired by one of the following pollutants: toxics, acidity, toxic chemicals or fecal coliform bacteria. Maryland’s most recent TMDL list was approved by the EPA in September 1998.

3.3.6 State Process for Establishing TMDLs

⁸ This list also indicates whether a particular watershed is targeted for the next two years.

The first step in the TMDL process is to identify waterbodies that are impaired and should have TMDLs. This involves assessing existing water quality information collected by a variety of monitoring techniques. Where necessary, additional monitoring may be conducted to fill in data gaps necessary to support a defensible TMDL. Computer modeling is then used to estimate pollutant loadings to the waterbodies, and water quality impacts of the pollutant loadings under varying conditions, such as low stream flows. The modeling is used to estimate the maximum load of pollutants that will not violate water standards. Once this maximum pollutant load is defined, it must be allocated between point and nonpoint sources, accounting for the margin of safety and future allocation as follows:

$$TMDL = \text{Point Source Allocation} + \text{Nonpoint Source Allocation} + \text{Margin of Safety} + \text{Future Allocation}$$

The allocation will balance equity and cost considerations, and may involve innovative approaches such as trading between different pollutant sources. The public, affected dischargers, regional agencies, and local governments⁹ will be involved in the TMDL process. Public participation is further discussed in Section 4.0 of this document.

3.3.7 Incorporation of TMDLs into State Water Quality Management Plans

After the establishment of a TMDL, additional steps are taken to attain the goals of the TMDL, and thereby achieve and maintain water quality standards. These additional controls can be categorized into two general classes: Controls for point sources of pollution (typically defined as pollution that comes from the end of a pipe), and controls for the remaining nonpoint sources of pollution (typically defined as diffuse sources of pollution).

Upon approval of a TMDL by EPA, the measures for conducting future environmental management activities will be documented through Maryland's Continuing Planning Process (CPP). NPDES Permit limits for point sources must be consistent with the waste load allocations established as part of the TMDLs. Non-point source controls may be established by implementing Best Management Practices (BMPs) through voluntary or mandatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects.

Water Quality Management Plans also provide more information on TMDL implementation. Updating Water Quality Management Plans are further discussed in Section 3.4 of this document.

3.3.8 Incorporation of Approved Loads into NPDES Wastewater and Industrial Discharge Permits

For point sources, incorporation of approved TMDLs into NPDES Wastewater and Industrial Discharge Permits is briefly discussed in the previous Section. More information on TMDLs and related issues can be found at MDE website.

⁹ Procedure of involvement of the Local government is recently established.

For nonpoint sources, controls are established by implementing Best Management Practices (BMPs) through voluntary or mandatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration project. Additionally, when allowing for nonpoint source controls, implementation plans will provide the following:

- A reasonable assurance that the controls will be implemented and maintained, or
- An effective monitoring program to demonstrate that nonpoint source reductions are taking place.

State's water quality monitoring program is already discussed in Section 3.3.3 of this document.

3.4 UPDATING AND MAINTAINING WATER QUALITY MANAGEMENT PLANS

40 CFR 130.5 (b)(4): The process for updating and maintaining Water Quality Management (WQM) plans, including schedules for revision.

Over the past several years, the State of Maryland has developed several reports (and plans) related to water quality management. Some of these reports are being periodically updated. Table 1 gives the examples of typical Water Quality Management Plans (WQMP) that describe various water quality management activities in Maryland. These plans are updated approximately every two years; however depending on the situation, some of these reports might be updated in less than two-year intervals. These WQMPs discuss on the current situation of water quality and strategies to be implemented to achieve water quality goals. Input from Maryland Tributary Teams¹⁰, and general public are considered for updating and maintaining WQM. These updates will be documented through the Maryland's Continuing Planning Process (CPP). Public participation is further discussed in Chapter 4.0 of this document.

3.5 INTERGOVERNMENTAL COOPERATION

40 CFR 130.5 (b)(5): The process for assuring adequate authority for intergovernmental cooperation in the implementation of the State WQM program

As a result of the reorganization of State environmental programs in 1995, the Maryland Department of the Environment remains the primary implementation and enforcement agency for water management programs. However, activities conducted by other State agencies, as well as by regional organizations and local government, play roles in water pollution control throughout Maryland.

Appendix A provides a comprehensive inventory of existing activities carried out by the various

¹⁰ Maryland's Tributary Teams, comprised of local citizens, farmers, business leaders and government officials appointed by the Governor are working to keep Maryland's waterways clean and healthy.

levels of government in Maryland that relate to water quality planning and management. The Table presented in Appendix A organizes these activities under the following twelve major headings:

1. Water Quality Standards
2. Water Quality Management Planning
3. Discharge Permits: Limitations, Pretreatment and Enforcement
4. Sewerage, Water Supply, Solid Waste Facilities: Planning¹¹
5. Sewerage, Water Supply, Solid Waste Facilities: Construction and Operation
6. Non-point Source Control: Regulation
7. Non-point Source Management Practices: Technical and Financial Assistance
8. Groundwater Supply Quality and Quality Control
9. Solid and Hazardous Waste Management: Regulation
10. Aquatic and Terrestrial Habitat Protection
11. Technical Analysis and Evaluation
12. Public Participation/education

Functionally, the activities incorporated in Appendix A reflect all major aspects of water quality management: short and long-range planning; regulation; implementation; evaluation; and public involvement.

Environmental Partnership Agreement of 1999: Environmental Partnership Agreement (EnPA) of 1999 is a typical example of intergovernmental cooperation on environmental issues. This Environmental Performance Partnership Agreement is entered into between the Regional Administrator of Region III of the US Environmental Protection Agency (EPA) and the Secretaries of the Maryland Departments of Environment (MDE) and Natural Resources (DNR). The Maryland Department of Agriculture (MDA) is a cooperating agency, but is not a signatory to this Agreement.

In the last few years, states and the federal government have been entering into agreements that seek to better coordinate efforts to protect human health and the environment. This list also indicates whether a particular watershed is targeted for the next two years. In 1998, Maryland's public health, environmental and natural resources protection agencies entered into their first agreement with the EPA. The purpose of the FY 1998 Agreement between the MDE and DNR (the Departments) and the EPA, was to provide for the development of a long-term, results-based management plan that will improve the effectiveness of Maryland's environmental programs and strengthen the relationship between the Departments and EPA. That Agreement established a multi-year strategic planning/agreement process that set forth Maryland's environmental goals, identified the programs designed to achieve those goals, established and adopted indicators to measure progress, described existing workload responsibilities,

¹¹ *All counties and city of Baltimore are required to have water and sewer plans. As a part of Continuing Planning Process, these jurisdictions amend and update their plans on a routine basis. Every three years a report of the review of their existing plans is required (required by the State law). Water and sewer plans are maintained by the Water Management Administration (WMA) of the MDE. WMA is charged with administering the program as current as possible. Solid waste issue is discussed under Section 3.7 of this document.*

defined the State/EPA relationship, and reflected a comprehensive public participation process that will help guide future program direction.

Involving the public throughout the Environmental Performance Partnership process has been a guiding principle for the Partners. Last year, formal public meetings were held at locations across the state. In addition, a wide variety of stakeholder groups were consulted regularly, and many of the key documents associated with the formation of this Agreement were posted on the Internet. The public has played a vital role in shaping each of the elements of the Agreement. The Partners affirm the importance of this public participation process and recognize the value that public comments have added to the Agreement. In FY 1999, the Partners will continue to rely on their stakeholders and the public to provide ongoing input and feedback. Public participation issue is further discussed in Chapter 4.0 of this document.

River Basin Commissions: This is another example of Maryland's interaction with other agencies. Regarding the development of Maryland's Smart Growth Plan, there are two river basin commissions of greatest interest: the Interstate Commission on the Potomac River Basin (ICPRB) and the Susquehanna River Basin Commission (SRBC). These Commissions provide two Smart Growth opportunities: (1) they provide a venue through which Maryland can educate neighboring states about growth issues in general, and Smart Growth in particular, and (2) the Commissions can help Maryland deal with interstate or regional issues related to Smart growth, such as water appropriations and nutrient loads to shared river segments. If Maryland can successfully accomplish the first, progress toward the second should follow. As Smart Growth proceeds, part of Maryland's intent is to lead the way by showing that growth issues can be dealt with successfully, and the political issues overcome.

Recently, the Washington metropolitan area water suppliers, the Corps of Engineers, and the ICPRB worked closely together to manage regional water resources in times of drought. The work involved the implementation of operating procedures which have been developed and refined for two decades. More information on this can be found in MDE and DNR websites.

3.6 ESTABLISHING AND IMPLEMENTING WATER QUALITY STANDARDS

40 CFR 130.5 (b)(6): The process for establishing and assuring adequate implementation of new or revised water quality standards, including schedule of compliance, under Section 303(c) of the Act

Maryland's water quality management program is a comprehensive, long range program aimed at assessment of existing and potential sources of pollution. Integral to this process is the development and implementation of water quality standards that define and protect existing water quality and its designated uses. Another important element is the development and implementation of regulations that specifically address and control various types of water pollution. Water pollution control regulations are viewed as a dynamic process capable of change in response to increased understanding of water pollution problems.

Currently, the State's water quality standards are codified in COMAR 26.08.01 (Water Pollution - General) and COMAR 26.08.02 (Water Quality). The standards establish designated uses of surface water and establish water quality criteria to protect these designated uses. In addition, these regulations define the anti-degradation policy of the State as well as other policies that apply to water quality standards. All waters of the State are currently protected for the basic uses of water contact recreation, fish and other aquatic life, wildlife and water supply. The state reviews its water quality standards every three years as required by the CWA.

Development of water pollution control regulations is of equal importance to the development of water quality standards. Water pollution control regulations seek to assure that pollution sources are controlled so that State water quality standards are not violated. These regulations are specific in nature and address problems identified as having an adverse impact on water quality. Water pollution control regulations are contained in COMAR 26.08.03 (Discharge Limitations), 26.08.04 (Permits) and 26.08.08 (Pretreatment).

Public participation is an important component in establishing and implementing water quality standards. Public participation is further discussed in Chapter 4.0 of this document.

3.7 MANAGEMENT OF RESIDUALS FROM WATER TREATMENT PROCESSING

40 CFR 130.5 (b)(7): The process for assuring adequate controls over the disposition of all residual waste from any water treatment processing

Residuals from drinking water treatment plants include the wastes from two major unit processes: sludge from the sedimentation process and spent backwash water from the filtration process. These wastes are handled in several different ways by the water systems in Maryland, depending on the design and capabilities of the treatment plant, and on the community that the treatment plant serves. Options include:

- *Wastes sent to a wastewater plant through the collection system or by truck hauling*
- *Wastes treated in a separate settling process which will allow solids to settle out: Solids are sometimes sent to on-site drying beds. Solids are removed and disposed of through land application or other permitted method. The decant is sent to a wastewater plant or recycled.*
- *Wastes recycled to the head of the treatment process: Although the least desirable of all waste management options, if this is done, it is recommended that no more than 5% of the total raw water flow be recycled over an extended time.*
- *Wastes sent to the raw water source, usually downstream of the raw water intake: This is a permitted discharge.*

3.8. CONSTRUCTION NEEDS FOR WASTEWATER TREATMENT

40 CFR 130.5 (b)(8): *The process for developing an inventory and ranking, in order of priority of needs for construction of waste treatment works required to meet the applicable requirements of Sections 301 and 302 of the Act.*

3.8.1 Needs Survey

The Needs Survey, a joint effort of the U.S. Environmental Protection Agency and the States, is an assessment of needed publicly-owned wastewater treatment facilities, correction of combined sewer overflows, and management of stormwater and nonpoint source pollution, in the United States. The State provides data for the survey to EPA for biennial report to Congress as required by Sections 205(a) and 516(b) (1) of the Clean Water Act. For budgetary reasons, the Survey is now conducted every four years (although the statute stipulates biennial).

The Needs Survey assesses the capital investment required to meet wastewater infrastructure needs of current population, as well as the additional amount needed for population growth for the next 20 years and to meet water quality standards.

The Needs Survey includes water quality programs and projects eligible for funding under the Clean Water State Revolving Loan Fund (SRF) program in accordance with Title VI of the CWA. It encompasses the documented capital costs required to meet the needs of wastewater collection and treatment infrastructure in accordance with Section 212 of the CWA including not only publicly owned treatment works (POTWs), but also combined sewer overflows (CSOs), separate sewer overflows (SSOs) and phase I/II stormwater project. It also covers the Nonpoint Source (NPS) and National Estuary Programs defined in Section 319 and 320 of the CWA, respectively.

A “need” is a cost estimate for a project eligible for SRF funding under the CWA. The cost estimates for the needs identified in the Needs Survey are either reported by the States or modeled by the EPA. Reported needs include costs for facilities used in the conveyance, storage, treatment, recycling, and reclamation of municipal sewage wastes. Estimates are included for all types of needed changes to wastewater facilities, including constructing entirely new facilities as well as enlarging, upgrading, abandoning, and replacing existing facilities. Existing facilities are considered for replacement when they have reached the end of their design life and are obsolete. Additionally, costs for structural and non-structural measures and costs to develop and implement State and municipal stormwater and NPS programs are included. For the modeled categories (i.e. stormwater and NPS), EPA prepared cost estimates for facilities and program activities eligible for funding under the SRF program. These estimates do not include costs for operation and maintenance. It should also be noted that in accordance with the “Funding Framework” document, non-structural (nonpoint source) measures are not eligible for SRF funding. SRF funds will be used to implement the activities mentioned in the approved *NPS Management Plans (prepared in accordance with Section 319 of the CWA)* and

they will not be used to develop NPS activities.

Needs estimates are presented in Table 2 for the various categories of wastewater treatment and water pollution control projects. Categories I through V are prominent in the Construction Grant Program. Accordingly, these are often referred to, as “traditional” needs categories.

Cost Data. Working through the state agencies, EPA obtains estimates of the needed future capital investment for each individual municipal wastewater treatment facility. The cost estimates are for those portions of a facility eligible for federal financial assistance under the Clean Water Act. Cost estimates are obtained from detailed planning documents whenever possible. Costs for small systems are modeled based on a review of selected small systems.

Facility Data. In addition to cost data, various types of technical information for each facility are collected. Of interest are the operational status of the facility, the population of the service area, the existing or planned treatment process, anticipated changes or additions to the treatment process, current and projected effluent quality, and required sewer system expansions or improvements. As part of the FY 2000 survey, emphasis is being placed on inputting latitude and longitude information for all facilities.

Hydrologic Data. The cost and facility data are also linked to various hydrologic data for national analysis and basin-wide water quality simulation. Stream system data include hydrologic flow paths, mean and low flows, and stream segment length, slope, and latitude/longitude. Pollution data for point sources include the receiving stream, current and planned municipal effluent characteristics and flows, and standardized industrial effluent data. Also included are the state-designated uses and the ammonia and dissolved oxygen criteria that apply to each stream. The data are grouped by the 21 U.S. Geological Survey regional hydrologic units.

3.8.2 Integrated Project Priority System (1999)

Maryland’s Integrated Project Priority System was developed by the MDE and approved by the EPA. It outlines criteria for prioritizing wastewater, nonpoint source and estuary management projects into a single list (Priority list) to provide low interest loan funding through the SRF as authorized in title VI of the CWA. The priority listing represents a ranking of sewerage facility needs as well as eligible nonpoint source projects as determined through a comparative analysis as to the degree of severity of water quality and public health problems. Factors determining the relative order of priority include severity of pollution problem, anticipated benefit to be derived, and the ability of the project to meet federal and State enforcement requirements. With respect to the assessment of water pollution severity, the State draws directly upon the Maryland Clean Water Action Plan and the biennial documentation of Maryland’s water quality prepared pursuant to Section 305 (b) and 303 (d) of the federal CWA.

The Integrated Project Priority System outlines criteria and procedures for prioritizing wastewater, non-point source and estuary management projects into a single list (Project Priority List) to provide low interest loan funding through the Maryland Water Quality State Revolving Loan Fund

(WQSRF) as authorized in title VI of the Clean Water Act.

WQSRF financial assistance can be used to fund construction of publicly owned wastewater treatment works, implementation of non-point source capital improvements consistent with Maryland's Non-Point Source Management Plan (under Section 319 of the Clean Water Act), and implementation of estuary capital improvements consistent with Maryland's Coastal Bays Action Plan (an estuary conservation and management plan under Section 320 of the Clean Water Act). All project to be financed through WQSRF must have water quality/public health benefits.

The priority list contains project information required by the EPA and is subject to the public participation process which includes mass distribution to applicants and interested parties and a public hearing before being submitted to the EPA for final approval.

3.8.3 Maryland Water Quality Financing Administration (WQFA)

The Maryland Water Quality Financing Administration (WQFA) was created during the 1988 session of the Maryland General Assembly as a component unit of the State of Maryland. The Administration's purpose is to encourage capital investment for wastewater and drinking water projects pursuant to the Clean Water Act of 1987, and the Safe Drinking Water Act and Amendments of 1996. The Administration administers two loan funds:

- Water Quality Revolving Loan Fund (WQRLF) created during the 1988 session of the Maryland General Assembly for the purpose of providing below market rate of interest loans for wastewater projects;
- Drinking Water Revolving Loan Fund (DWRLF) created during the 1993 session of Maryland General Assembly for the purpose of providing below market rate of interest loans for drinking water projects.

Both loan funds receive federal funding from the United States Environmental Protection Agency (EPA) under the Capitalization Grants for State Revolving Funds federal assistance program. The Administration is empowered to issue bonds subject to approval of the State Board of Public Works and Secretary of the Maryland Department of the Environment (Department). Bonds issued by the Administration do not constitute a debt or pledge of the full faith and credit of the State or any political subdivision thereof, other than the Administration. The bonds are paid solely from the revenue, money or property of the Administration pledged therefor under its Indenture of Trust dated March 1, 1990, as amended (Indenture) between the Administration and its trustee bank.

3.8.4 General Water Quality State Revolving Fund Eligibility – Point Source Project

Types of projects involving construction of publicly owned wastewater (sewerage) facilities that reduce and prevent water pollution problems qualifying for funding and thereby qualifying for inclusion on the priority list include:

- New, expanded, or rehabilitated wastewater treatment plants including Biological Nutrient Removal
- Infiltration/inflow correction
- Replacement/rehabilitation of sewers
- Collector, trunk and interceptor sewers, pumping stations
- Combined sewer overflow abatement
- Septage receiving and handling facilities
- Sludge handling and disposal facilities
- Water treatment plant filter backwash and sludge treatment
- Leachate pretreatment at municipal landfills

3.8.5 General Water Quality State Revolving Fund Eligibility – Nonpoint Source Project

SRF financial assistance can be used to fund construction of publicly owned wastewater treatment works, implementation of non-point source capital improvements consistent with Maryland's NPS Management Plan, and implementation of estuary capital improvements consistent with Maryland's Coastal Bays Action Plan (an estuary conservation and management plan under Section 320 of the CWA). The project to be financed must have water quality benefits. SRF financial assistance can be obtained directly through the Department or through MDE's Linked Deposit Program, which enables public and private entities to use SRF loans as a source of low interest financing to implement eligible NPS projects.

Both public and private entities may use SRF loans for eligible NPS projects. The types of NPS projects that are eligible for Maryland's SRF financing include:

- Waterbody restoration that includes water quality improvements (example, stream bank stabilization, drainage erosion, and sediment control)
- Restoration of riparian vegetation, wetlands, and other waterbodies
- Aquatic habitat restoration and protection projects
- Existing stormwater management facility repair and new stormwater requirements. Examples of these include stormwater wet ponds, stormwater wetlands, infiltration practices, filter systems, open channel practices, and non-structural practices.
- Correction of failing septic systems
- Rehabilitation or removal of leaking petroleum/chemical storage tanks for pollution prevention
- Water quality protection components of voluntary cleanup program and state master list sites where controlled hazardous substances remediation is not underway
- Highway deicing materials storage and efficient salt application equipment
- Collection and treatment of runoff from municipal airports that has been contaminated by aircraft deicers or other pollutants
- Land purchase or conservation easements for water quality protection wellheads or watersheds
- Agricultural BMPs may include

- Grade Control Structures
- Sediment Control Ponds
- Manure Storage Facilities
- Stream Protection (Fencing)
- Grazing Land Management System (Fencing)
- Wetlands Creation Enhancement
- Manure Spreaders, Pumps and Appurtenances

3.9 DETERMINING THE PRIORITY OF PERMIT ISSUANCE

40 CFR 130.5 (b)(9): *The process for determining the priority of permit issuance*

EPA uses a major/minor classification system for industrial and municipal NPDES permits to provide an initial framework for setting permit issuance priorities. Based on those guidelines, procedures followed by the State of Maryland are discussed in the subsequent paragraphs.

Within the existing EPA major permit classification system, a point score is used to identify discharges with high environmental impact. These are placed into the “major permits” category. The emphasis is on toxic pollutants, high volumes of environmental pollutants, and thermal pollution. The State may reevaluate a facility’s major/minor classification rating, based on new data indicating a toxic effluent, high flow, or any other significant change. Once the distinction between the major and minor permits has been made, the permits of highest priority for issuance are the major permits.

Other factors for determining the priority of issuance for industrial surface water discharge permits apply to both minors and majors. The application for a new permit has a higher priority of issuance since the applicant, by law, cannot discharge wastewater before the permit is issued. The permit holder of a permit with an expired date can discharge under the expired permit condition, provided an application for renewal has been submitted to the State.

Development of general permits technically represents a grouping of minor permits into one, thus eliminating many hours of administrative work. For this reason, the development of a general permit has the same priority as a major permit. Of highest ranking are the general permits replacing the greatest number of individual minor permits.

Discharge permits have been further categorized and grouped according to geographical areas (watersheds). A processing schedule has been established so that permits in the same watershed will be processed during the same time period. A permit with less than half of the effective period remaining when its watershed is being permitted may be processed early for reissuance with all of the permits in the watershed. Other permits may be allowed to expire and then be administratively extended (for no more than 2.5 years) to get on cycle with the other permits in the watershed group. Priorities for processing permit applications will be assigned based on the watershed schedule unless environmental

concerns or business operating plans require reissuance of a permit in advance of the watershed permit schedule.

Maryland has established a watershed permitting approach which incorporates the EPA's major/minor classification system for industrial and municipal NPDES permits. The permit priority procedure can be summarized as follows:

- The processing of a major permit has priority over a minor permit.
- Development of a general permit has the same priority as a major permit.
- Processing of a new permit application has a higher priority than processing a renewal application.
- Processing of applications for permit renewals that have passed permit expiration dates have higher priority over applications with permit dates still in effect.
- Processing of applications will be based on a watershed schedule.

Maryland NPDES Wastewater and Industrial Discharge Permit Backlog

EPA Headquarters has identified NPDES Wastewater and Industrial Discharge permit backlog as a material weakness under Federal Managers Financial Integrity Act (FMFIA) and set goals to reduce major permit backlog to 20% by 12/31/99, and 10% by 12/31/01. Maryland currently has about 24% major permit backlog.

Background: In September 1998, Maryland proposed instituting a watershed approach to NPDES Wastewater and Industrial Discharge permit issuance, which is tied to development of TMDLs. Specifically, Maryland divided the state into five watersheds. The watershed strategy used for TMDL development (extensive monitoring, TMDL modeling, and implementation through permits or Best Management Practices) will coincide with watershed permitting. To place each permit on cycle, Maryland will allow any permit less than 2.5 years old when its watershed is being permitted will not be revoked or reissued unless changing it is of special water quality significance. Later, when an application to renew that permit is received, it will be administratively extended up to 2.5 years to get it on cycle with the other permits in the watershed group. Permits which are older than 2.5 years will be revoked and reissued in the cycle year. This may initially lead to an increase in backlog, but should be eliminated as the watershed approach concludes its first cycle. The first watershed permits should be issued in 2000. Maryland has also historically had a major permit backlog of about 20%.

One factor in this backlog is that Maryland's permit appeal process takes place before the permit can be issued whereas EPA's process in other states occurs after issuance. Maryland used to have permittees file renewal applications only, six months prior to expiration. Now the state is requiring earlier submittals to allow more time to reissue the permits. Maryland has a relatively small (14%) minor permit backlog, and has worked on updating information on minors.

Present Status: The region has discussed the FMFIA permit backlog initiative with Maryland, and Maryland has agreed to make every effort to reduce backlog within their watershed framework.

Regions for the 5-Year Watershed Cycling Strategy

Youghiogheny

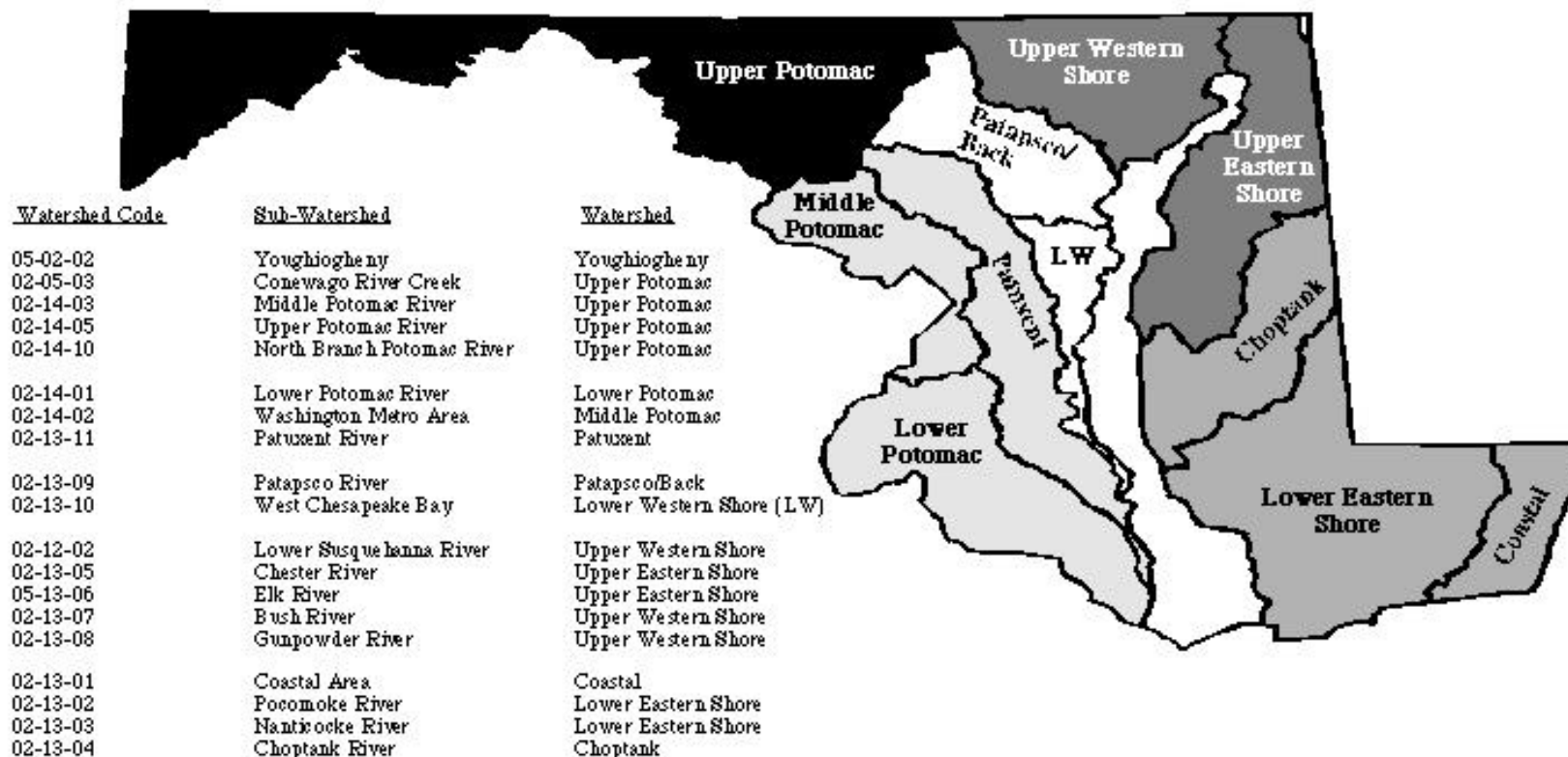


Figure 2



Maryland Department
of the Environment

Figure 3

Maryland Department of the Environment Watershed Cycling Strategy

Cycle 1

Cycle 2

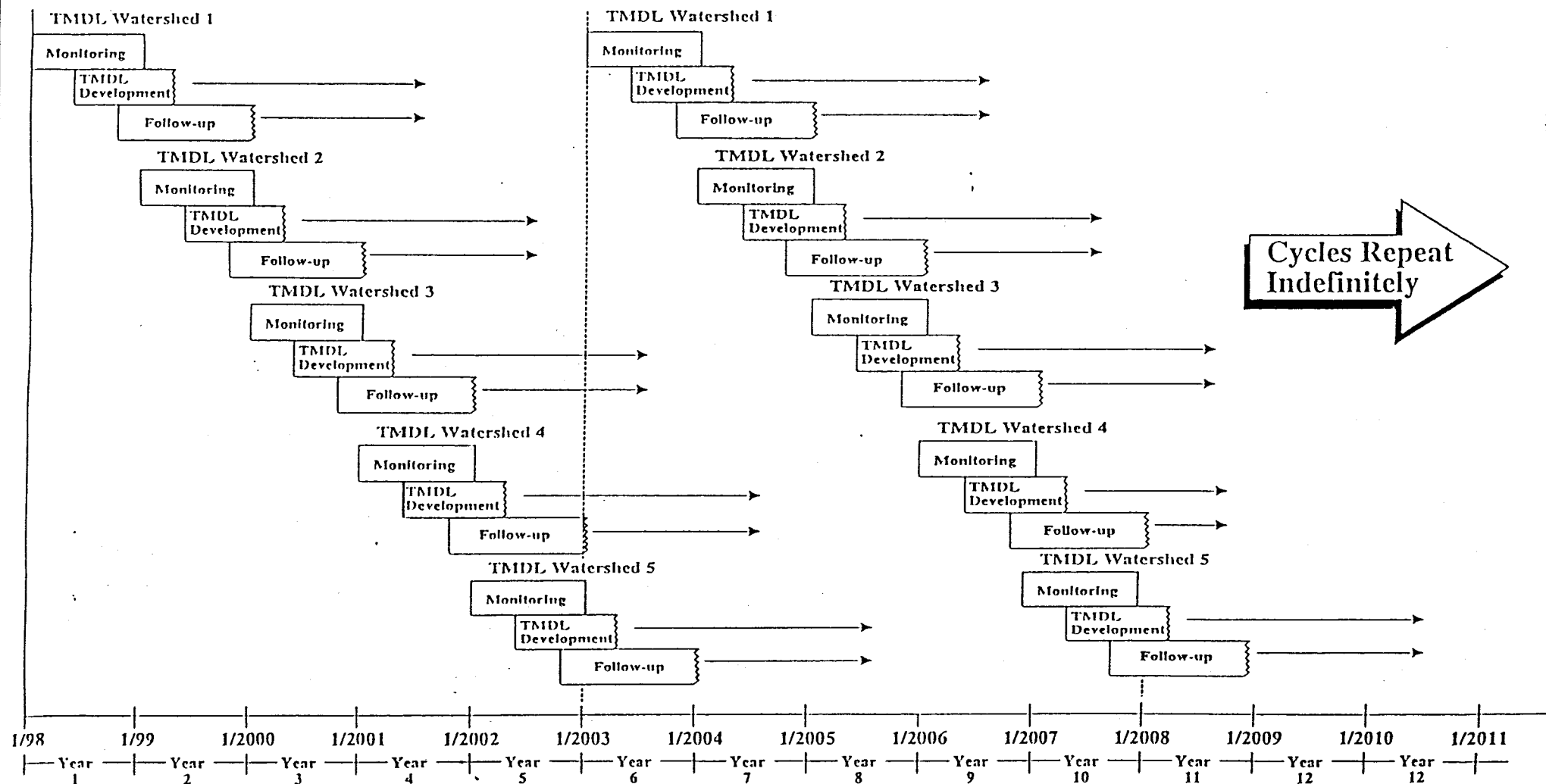


Table 1: Examples of Water Quality Management Activities in the State of Maryland

Name of the Document	Produced by	Date Prepared	Comment
Maryland Clean Water Action Plan - Draft	Clean Water Action Plan Technical Workgroup	December 1998	Unified Watershed Assessment
Today's Treasures for Tomorrow: Towards a Brighter Future - A Comprehensive Conservation and Management Plan for Maryland's Coastal Bays	Worcester County, Berlin, Ocean City, the State of MD and EPA	June 1999	Contains an action plan for the long-term restoration and protection of the coastal bays.
Action Report for the Reservoir Watersheds	Baltimore Metropolitan Council	1998	Updated annually
Tributary Strategies Annual Report	DNR	1999	Discusses about <i>Restoring the Chesapeake Bay</i> . Report includes, Team Reports, Cross-Team Initiatives and the progress made in implementing best management practices – updated annually.
Countywide Stream Protection Strategy (CSPS) → <i>An example of County Program</i>	Montgomery County	1999	CSPS was developed to provide an overall assessment of County stream conditions in order to identify and prioritize those watershed areas most in need of attention.
Patapsco/Back Rivers Watershed Study	MDE	9/1995	Discusses about conditions, pollutant loads and recommendations for further action
Maryland Nonpoint Source Management Plan	DNR	December 1999	Comprehensive guide to Maryland's nonpoint source pollution control problems, programs, and future steps
Maryland Source Water Assessment Program (SWAP)	MDE	1999	MDE submitted a final draft to EPA in February 1999. SWAP discusses a process for evaluating the vulnerability to contamination of the <i>source</i> of a public drinking water supply. SWAP outlines a plan to use a computerized geographic information system to analyze data for each water supply. Assessment is planned to be completed by May 2003.
A Citizen's Guide to the Water Quality Improvement Act of 1998	Chesapeake Bay Agricultural Programs	1988/99	Discusses the preparation and implementation (along with schedule) of nitrogen- and phosphorus-based nutrient management plan

Table 2: Categories of Wastewater Treatment and Water Pollution Control Projects

Category	Activity
I	Secondary Treatment
II	Advanced Treatment
III A	Infiltration/Inflow Correction
III B	Major Sewer Rehabilitation
IV A	New Collector Sewers
IV B	New Interceptor Sewers
V	Combined Sewer Overflows
VI	Stormwater Control (Phase I Municipal Stormwater Program)
VII A	NPS Control: Agriculture (Cropland)
VII B	Animals
VII C	NPS Control: Siviculture
VII D	Urban
VII E	NPS Control: Ground Water Protection – <i>unknown Sources</i>
VII F	Marinas
VII G	NPS Control: Resource Extraction
VII H	NPS Control: Brownfields
VII I	NPS Control: Storage Tanks
VII J	NPS Control: Sanitary Landfills
VII K	NPS Control: Hydromodification

CHAPTER 4.0

PUBLIC PARTICIPATION

The people of Maryland are at the heart of the State's environmental management. Over the past three decades or so, the people have spoken clearly and repeatedly of their desire for protection of natural resources, clean-up of pollution, a healthy Chesapeake Bay. These desires find expression in a variety of State laws and regulations covering the range of goals and issues reflected in this Section. Examples of typical Maryland regulations are presented in Appendix B.

A major principal of the water quality management toward which the State is moving in its approach to the environment and natural resources is that people are part of the environment; all of the people of Maryland are parts of the ecosystem(s) of the State, their health and quality of life affected by environmental conditions and many of their actions affecting other ecosystem components. Part of the job facing environmental managers at all levels of government is to bring together the social context with the science with which most of them have greater experience and comfort. A two-way communication system is called for—making environmental information available to the people, and hearing from the people their concerns and issues. In the subsequent paragraphs, typical public participation processes are briefly discussed.

4.1 DEVELOPMENT OF TOTAL MAXIMUM DAILY LOADS

Interested parties will be provided with introductory TMDL briefings upon request. A second round of more in-depth briefings will be provided to those who require more detail. The public is invited to become involved in the listing process. A public comment period is provided before the 303(d) list is submitted to EPA. Once work on a specific TMDL begins, local governments in that watershed will be consulted during key stages of development. After a draft TMDL has been developed, a formal public notice and comment period will be provided prior to the TMDL's submission to EPA. Upon the approval of a TMDL by EPA, it will be posted on the MDE's website during the public comment period of generally 30 days. When a TMDL is ready to be implemented, stakeholders will participate in determining which pollution sources should bear the treatment or control burden needed to reach allowable loading levels. Following are the typical examples of activities pertaining to public participation:

- Development of Maryland's Lower Delmarva Peninsula TMDLs: TMDL briefings for the Maryland's Lower Delmarva Peninsula were held on June 30, July 15, and July 27, 1999 for the Coastal Bays Region, Lower Eastern Shore, and Choptank River Region, respectively.
- The department arranged a meeting between EPA and the local governments that was held December 1, 1999 from 10 am to noon at the Howard County Gateway Building in Colombia, MD. The purpose of the meeting was for local governments to discuss their concerns and questions

about the federal TMDL and NPDES permit program, and coordination of water resources protection programs in Maryland.

- Development of TMDLs for Patapsco/Back Rivers: TMDL briefings for the Patapsco/Back River Watershed were held on December 9, 1999 at Baltimore City Community College – Harbor Campus.

4.2 DEVELOPMENT AND STATE REVIEW OF COUNTY WATER AND SEWERAGE PLANS

Water and Sewerage Plans: Consistent with State law and regulations, each revision, amendment or biennial update of a county water and sewerage plan by local governing bodies requires that a public hearing be held following public notification in newspapers with local and area wide circulation. Copies of these public notices are submitted by the counties along with their biennial updates to Maryland Office of Planning (MOP).

State Regulations: Adoption of or amendment to State regulations pertaining to county plans is subject to a public hearing process.

State Water Quality Advisory Committee (SWQAC): The SWQAC regularly reviews and comments on the broad range of State laws, policies, and programs that deal with water quality and pollution control. This includes State's water and sewerage plan review and approval process.

4.3 ESTABLISHMENT OF WATER QUALITY STANDARDS

The CWA requires that all states review their water quality standards every three years. While primary responsibility for water quality decision-making is vested by law in public agencies, active public involvement throughout the intergovernmental decision-making process is a clear priority and in this instance, is required. MDE holds hearing to gain such participation as part of the ongoing process of reviewing Maryland's water quality standards. Announcement of these public hearings will be done through newspapers, Internet and through local governments. The State Water Quality Advisory Committee regularly reviews and comments on proposed regulations. Following are the examples of the public meetings held in 1999:

- **January 19, 1999 (4 PM to 7:30 PM):** Chesapeake Room, MDE, Baltimore, MD
- **January 21, 1999 (6:30 PM to 8:30 PM):** Meeting Room, Talbot County Free Library, Easton, MD
- **January 26, 1999 (7 PM to 9 PM):** Room 113, Washington County Office Building, Hagerstown, MD

These meeting were structured to assure that as many participants as possible have the opportunity to speak. In order to assist the information exchange process, about 30-45 minutes was allowed for informal questions and answers. During the remainder of the hearing, formal comments were received and recorded. Written comments were accepted at the meetings and also for 30 days after the last of the three meetings. MDE strongly encouraged submissions of written statements. More information on the public participation process can be found at MDE website (www.mde.state.md.us/environment/wqsreview.html).

4.4 EFFLUENT LIMITATIONS, WASTELoad ALLOCATIONS (TMDLs), AND SCHEDULES OF COMPLIANCE FOR WASTEWATER DISCHARGES

A public hearing is held for each discharge permit that is developed. Notices of proposed effluent limitations and the time, date, and location of the public hearing are published in the Maryland Register and in a local newspaper. Members of the public are permitted to visit the Department's offices and review files during working hours. Changes to regulations pertaining to the issuance of discharge permits are subject to a public hearing. The State's discharge permit program is reviewed by the State Water Quality Advisory Committee.

Discharge Permits: A public hearing is held for each discharge permit that is developed. In addition, permit files are made available to the interested public.

Regulations: Public hearings are required whenever the applicable water quality regulations are revised.

State Water Quality Advisory Committee (SWQAC): The State Water Quality Advisory Committee periodically reviews the State's discharge permit program.

4.5 PRIORITY PROCEDURE FOR THE ISSUANCE OF SURFACE WATER DISCHARGE PERMITS RELATING TO WASTEWATER TREATMENT

Permit Issuance: A public hearing is held for each discharge permit before it is issued.

Priority Procedure: The priority procedure described above is developed in conformance with EPA policies. These federal policies are made public.

Regulations: Changes to regulations pertaining to the issuance of discharge permits are subject to public hearings.

SWQAC: The State Water Quality Advisory Committee periodically reviews the State's discharge permit program.

4.6 MANAGEMENT OF RESIDUALS FROM WASTEWATER TREATMENT PROCESSING

Each of the separate regulatory programs contains provisions for public participation. These are detailed below:

- Sewage Sludge Management. Upon receipt of an application for agronomic use of sewage sludge, the governing body of a county or municipality in which a sludge project is proposed (or an adjoining county within one mile of the proposed site) may request an informational meeting in the affected jurisdiction. Such a meeting is advertised in a local newspaper at least five days before the meeting. Local officials are notified of the date, time, and location of the meeting.

For marginal land reclamation sites, the governing body of a county or municipality (or an adjacent county within one mile of a proposed site) may request a public hearing in the affected jurisdiction. Such a hearing is advertised in a local newspaper at least seven days prior to the hearing.

Local officials are notified of the date, time, and location of the hearing.

For permanent facilities such as landfills, sludge composting or other facilities, the public hearing is mandatory.

- Industrial Waste Residuals. Facilities requiring a hazardous waste permit are subject to the full public participation requirements of requisite federal and State law.

Facilities requiring a State discharge permit are subject to the full public hearing process as required by law.

Facilities regulated through the 9-217 permit process are not subject to a public hearing. However, applications are forwarded to local officials for review and comment. If requested, an informational meeting is conducted in the affected jurisdiction.

- Solid Waste Plans. Each county, as part of their solid waste management plan process, includes provision for public participation. Once the plan is developed and submitted to the Department for review and approval, there is no provision for additional public input.
- SWQAC. The State Water Quality Advisory Committee periodically reviews the State's residual waste management program.

**4.7 INVENTORY AND RANKING OF NEEDS FOR CONSTRUCTION OF
FEDERALLY ASSISTED WASTEWATER TREATMENT WORKS**

- a. Maryland's Priority System and Priority List are subjected to several public hearings conducted each year in different geographical areas of the State. Both draft and final lists of facilities are sent to potential grantees, elected officials, consultants and other interested parties.
- b. Staff of the MDE Water Management Administration meet regularly with and receive comments from the Water Quality Grants Subcommittee of the State Water Quality Advisory Committee.

APPENDIX A

**COMPREHENSIVE INVENTORY OF EXISTING
ACTIVITIES**

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

<u>Activity</u>	<u>Government Level/ Lead Authority</u>	<u>Agent</u>
<i>Water Quality Standards</i>	State/MDE	Director Technical & Regulatory Services Admin. MDE
<i>Water Quality Management Planning</i>		
WQM Plan Certification	State/Governor	Director Technical & Regulatory Services Admin. MDE
WQM Plan Preparation/Revision	State/MDE	Director Technical & Regulatory Services Admin. MDE
--Designated Metropolitan Areas	Regional/COG	Executive Director Washington Metropolitan Council Governments Baltimore Metropolitan Council
--Statewide Agricultural WQM Plan	State/SSCC	Chairman State Soil conservation Committee MDA
Nonpoint Source Management Plan	State/DNR	Nonpoint Source Program Chesapeake and Coastal Watershed Service DNR
<i>Discharge Permits: Limitations, Pretreatment and Enforcement</i>		

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
Municipal Discharge Permits Surface or Groundwater	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
Industrial Discharge Permits Surface or Groundwater	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
Land Treatment Site Evaluation	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
Municipal, Industrial & Privately Owned Sewer Facility Inspection and Permit Compliance	State/MDE	Enforcement Program Water Management Administration MDE
Industrial Pretreatment Programs	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
	Local/Counties, municipalities, sanitary districts	Variable
<i>Facilities: Sewerage, Water Supply, Solid Waste Planning</i>		
Local Water and Sewerage Facilities Planning	Local Departments of Public Works; Sanitary Commissions; Planning Offices	Variable
Approval of County Water and Sewerage Plans and Amendments	State/MDE	Water Quality Infrastructure Program Water Management Administration

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
		MDE
Local Solid Waste Management Planning	Local/Counties	Variable
Approval of County Solid Waste Management Plans	State/MDE	Office of Planning & Outreach Services Waste Management Administration MDE
Population Projection and Land Use Data	State/DSP	Administrator Planning Data Division SDP
Hazardous Waste Facilities Sitting	State/MDE	Secretary Hazardous Waste Sitting Board MDE
<i>Sewerage, Water Supply, Solid Waste Facilities: Construction and Operation</i>		
Maryland Consolidated Capital Bond Loan, WQSRF, DWSRF Link Deposit	State/MDE	Water Quality Infrastructure Water Management Administration MDE
State-owned or Operated Sewage Facilities	State/DGS	Special Projects Team DGS
State-owned or Operated Sewerage Facilities	State/DNR	Director MD Environmental service DNR
Local Water and Sewerage Facilities Construction	Local/Departments of Public Works;	Variable

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
Operation and Maintenance	Sanitary Commissions; Engineering Offices	
Local Solid Waste Management	Local/County	Variable
<i>Nonpoint Source Control: Regulation</i>		
Violations of State Water Quality Standards and Regulations	State/MDE	Enforcement Program Water Management Administration MDE
Retrofits and Conversion MCCBLS, WQSRF, Link Deposit	State/MDE	
Sediment and Erosion Control (S/EC) Program	State/MDE	Nonpoint Source Program
--Regulations and Enforcement	State/MDE	Nonpoint Source Program Water Management Administration MDE
--Local S/EC Ordinances and Enforcement if Delegated by State	Local/Counties	Variable
--Review and Approval of Local S/EC Plans	Local/SCDs	Variable
Stormwater Management --State Stormwater Control Program Regulations	State/MDE	Nonpoint Source Program Water Management Administration MDE

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
--Local Implementation of Stormwater Management: Local Ordinances and Enforcement	Local/County or Municipal Agencies	Variable
Oil Control	State/MDE	Oil Control Program Waste Management Administration MDE
Surface Mining (other than coal): Reclamation and Water Quality Control	State/MDE	Mining Program Water Management Administration MDE
Coal Mining: Reclamation and Water Quality Control	State/MDE	Mining Program Water Management Administration MDE
Groundwater Permits Program --Regulations for on-site sewage disposal	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
--Local Implementation: on-site sewage disposal	Local/County Health Departments	Variable
Forest Management	State/DNR	Director, Public Hands & Forestry, Forests & Parks DNR
Innovative/Alternative On-site Waste Disposal Systems	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
<i>Groundwater Supply Quality and Quantity Control</i>		
State Groundwater Quality Protection Strategy	State/MDE	Public Drinking Water Program Water Management Administration MDE
Well Regulations	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
Water Appropriation Permits	State/MDE	Water/Wastewater Permits Program Water Management Administration MDE
Well Drilling Licensing Regulations	State/MDE	Executive Director Board of Well Drillers MDE
Implementation of State Groundwater Quality Programs and Policies	Local	Variable (Local Health departments Dept. of Public Works, etc.)
<i>Solid and Hazardous Waste Management: Regulation</i>		
Federal Resource Conservation and Recovery Act		
--State RCRA Program	State/MDE	Hazardous Waste Program Waste Management Administration MDE
--Municipal and Industrial Waste Regulations	State/MDE	Solid Waste Program Waste Management Administration MDE
--Hazardous Waste Regulations	State/MDE	Hazardous Waste Program

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

<u>Activity</u>	<u>Government Level/ Lead Authority</u>	<u>Agent</u>
		Waste Management Administration MDE
Pesticide Control Program	State/MDA	Pesticide Regulation Section Office of Plant Industries & Pest Mgmt. MDA
<i>Aquatic and Terrestrial Habitat Protection</i>		
Wetland Permits	State/MDE	Wetlands & Waterways Program Water Management Administration MDE
Waterway Construction Permits	State/MDE	Wetlands & Waterways Program Water Management Administration MDE
Enforcement of State Laws Related to Aquatic Resource Use	State/DNR	Superintendent Natural Resources Police DNR
Chesapeake Bay Critical Area Program	State/DNR	
<i>Nonpoint Source Control Management Practices: Technical and Financial Assistance</i>		Critical Area Commission & Local Governments
Clean Marinas Program	State/DNR	Clean Marinas Program committee
Section 319 Nonpoint Source	State/DNR	Nonpoint Source Program DNR
Maryland Agricultural Cost-Share Program	State/MDA	Administrator MD Ag. Cost-Share Program MDA

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
Local Implementation of Ag Water Quality Management	Local/SCD Board of Supervisors	Variable
Related Federal Agricultural Assistance Programs	Federal/SCS and ASCS	State Conservationist SCS Maryland State Office
	Federal/SCS: Regional Office and Local Soil Conservation District Offices	Variable
Small Creek & Estuaries Program	State/MDE	Chief Capital Program Planning Water Management Administration
--Regulations and Oversight	State/DNR	Chairman Chesapeake Bay Critical Commission
--Local Implementation	Local/Counties and Municipalities	Variable
<i>Technical Analysis and Evaluation</i>		
Water Quality Monitoring, Evaluation, and Research Program Design	State/MDE	Technical & Regulatory Services Admin. MDE
--Field Program for Ambient Water Quality Monitoring: Chesapeake Bay Program, Maryland Biological Stream Survey, CORE/TREND Water Quality Monitoring	State/DNR	Resource Assessment Services
--Compliance Monitoring	State/MDE	

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
--Special Field Studies to support permit decisions	State/MDE	Field Operations Program Technical & Regulatory Services Admin. MDE
--Maryland Water Quality (Section 305(b) Report)	State/DNR	Resource Assessment Service DNR
--State and Chesapeake Bay Program Data Base Management	State/DNR	Resource Assessment Service. DNR
--Water Quality Monitoring	State/MDE/DNR	Watershed Management Division Computer Monitoring & Info. Mgmt. System Program
Agricultural Nonpoint Source Research	State/University of Maryland	Director Agricultural Experiment Station University of Maryland
Submerged Aquatic Vegetation Studies	State/DNR	Director Assessment Program DNR
Fisheries Management	State/DNR	Director Fisheries Service DNR
Scenic Rivers Assessment and Planning	State/DNR	Director Land Planning Services Capital Programs Administration DNR
Hydrologic Characteristics of Maryland Groundwater Resources	State/DNR	Director MD Geological Survey DNR
Groundwater Supply/Planning, Conservation, and Natural	State/MDE	Water/Wastewater Permits Program Water Management Administration

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

Activity	Government Level/ Lead Authority	Agent
Quality Assessment		
Groundwater Supply/Ambient Contamination Assessment	State/MGS	Director, Maryland Geologic Survey DNR, MDE
Groundwater Contamination	State and MDE	Waste Management Admin, MDE
<i>Public Participation/Education</i>		
Public Input to WQM Plans & Tributary Strategies	Local/Public Advisory Councils to MDE/COG/DNR	Variable (by river basin or metropolitan area)
Statewide Water Quality Activities: Public Input	State/State Water Quality Advisory Committee (SWQAC)	Chairman SWQAC
Coastal Zone Management Activities	State/Coastal and Watershed Resources Advisory Council (CWRAC)	Chairman CWRAC
Agricultural Nonpoint Source: Public Education	State/University of Maryland	Director Cooperative Extension Service University of Maryland
	State/University of Maryland: Local Extension Agents	Variable
	Local/SCDs	Variable
Public Information on State Environmental Programs	State/MDE	Director Information & Community Assistance MDE
Public Information on State	State/DNR	Director

COMPREHENSIVE INVENTORY OF EXISTING ACTIVITIES

<u>Activity</u>	<u>Government Level/ Lead Authority</u>	<u>Agent</u>
Natural Resources Programs		Public Communications DNR
<i>Interstate Activities</i>		
Interstate Commission on the Potomac River Basin	Interstate/ICPRB	Executive Director ICPRB
Susquehanna River Basin Commission	Interstate/SRBC	Executive Director SRBC
Monitoring Coordination Maryland Water Monitoring Council	MWMC	Mutual Assistance Group efforts lead by DNR

APPENDIX B

EXAMPLES OF TYPICAL MARYLAND REGULATIONS

WATER MANAGEMENT ADMINISTRATION

The mission of the Department's Water Management Administration (WMA) is to restore and maintain the quality of the State's ground and surface waters; and to plan for and supervise the development and conservation of the State's waters. WMA manages a broad range of activities, including regulating and financing municipal wastewater treatment systems, regulating the use and development of the State's water resources, public water supplies and on-site residential sanitation systems; regulating well-drilling and industrial pretreatment; providing technical assistance for water and wastewater utilities; financing small creek and estuary restoration; approving erosion/sediment control and storm water management plans; storm water permitting; dam permitting and inspection; protection and management of tidal and nontidal wetlands and waters; and regulating mining activities and mitigation problems associated with abandoned mines. These protection, financing and regulatory activities help WMA ensure that State waters are safe for drinking, recreation and wildlife.

PROGRAMS ADMINISTERED BY THE WMA ARE:

- Office of Program Development & Business Services
- Office of Administrative Services
- Water Quality Infrastructure Program
- Nonpoint Source Program
- Water/Wastewater Permits Program
- Wetlands & Waterways Program
- Compliance Program
- Mining Program
- Water Supply Program

THESE PROGRAMS ARE DESIGNED TO:

Create a focal point for outreach and assistance activities that can address cross-functional issues involving water regulatory programs.

Manage water, wastewater, and nonpoint source pollution control capital projects that are funded through grants and loans from the Department.

Permit and provide construction inspection for water and sewerage facilities.

Develop and implement the new federally mandated storm water permitting program.

Issue erosion/sediment control and storm water management plan approvals for state and federal construction projects.

Inspect dams for safety, issue new permits, and approve downstream warning plans for high hazard dams.

Issue water appropriation permits for use of surface and ground waters.

Issue permits for discharges to surface and ground water from both industrial and municipal facilities as required by the federal Clean Water Act.

Oversee programs delegated by the Department to local health departments. Activities include MDE's regional consultants who provide technical assistance to local health departments for on-site water and wastewater systems, and assistance in developing and testing new innovative or alternative septic system designs.

Regulate activities conducted in nontidal wetlands and their buffers, and nontidal waterways, including the 100-year floodplain. Also, regulates activities conducted in tidal wetlands.

Create, restore and enhance nontidal wetlands and streams, provide training and technical assistance and assist in the development of watershed management plans.

Inspect industrial and municipal wastewater discharges, coal and surface mining operations, agricultural sites, and construction activities involving sediment control, storm water management, wetlands and waterways.

Regulate active mines and mitigate environmental problems associated with abandoned mines. Also, regulate oil and gas exploration, production and storage.

Ensure safe drinking water in Maryland by administering the federal Safe Drinking Water Act, developing the State's comprehensive ground water protection program, and responding to local water supply emergencies. Conduct performance evaluations of surface water filtration plants to assist systems in optimizing treatment and reducing the risk of passing *Cryptosporidium* (a protozoan parasite that can infect humans) into the finished water.

Train public water and wastewater treatment operators and provide on-site technical assistance to support the State's operator certification program and achieve compliance and pollution prevention goals.

Finance storm water management practices and small creek and estuary restoration projects.

The Environmental Boards are comprised of three State licensing boards, established by the General Assembly. Also located within the Water Management Administration, the Boards were created to license and certify individuals as:

- Environmental Sanitarians;
- Superintendents and operators of waterworks, wastewater works, industrial wastewater works, wastewater collection systems and waste water distribution systems; and
- Well drillers, water conditioner and water pump installers.

The Environmental Boards screen applicants wanting to enter the professions, administer competency examinations, evaluate continuing education as a prerequisite for license renewal, and take disciplinary action against those licensees found guilty of violating the law.

3.01 SURFACE WATER DISCHARGE PERMIT (INDUSTRIAL)

PURPOSE

The industrial surface water discharge permit is a combined state and federal permit under the National Pollutant Discharge Elimination System (NPDES). This permit is issued for industrial facilities that discharge to State surface waters. The permit is designed to meet federal effluent guidelines when applicable and also ensure the discharge satisfies State water quality standards.

All industrial, commercial or institutional facilities that discharge wastewater (or storm water from certain facilities) to surface waters of Maryland need this permit. Alternatively, an industrial discharge to the municipal wastewater collection system may require a pretreatment permit.

AUTHORITY

FEDERAL: Federal Clean Water Act.

STATE: Environment Article, Title 9, Subtitle 3; COMAR 26.08.01 through 26.08.04 and COMAR 26.08.08.

REQUIREMENTS

POST-APPROVAL: Must meet all effluent limits, monitoring requirements and other permit conditions.

LOCAL AND OTHER APPROVALS

PRETREATMENT PERMIT: A separate pretreatment permit is required for those facilities that seek to discharge to municipal wastewater treatment systems. The pretreatment permit is issued locally from the municipal wastewater treatment utility as long as they have an approved program, otherwise the pretreatment permit is issued by the Department. If a facility is defined as a significant industrial user by 40 CFR 403, the Department issues the pretreatment permit, which includes the state and federal requirements, in coordination with the local municipality. As part of its permit streamlining efforts, the Department delegated the authority to many local municipalities to issue pretreatment permits for significant industrial users.

APPLICATION PROCESS

1) Submit a completed application to the Department. To request a form, call (410) 631-3323 or download the form from our web site, <http://www/mde.state.md.us>.

2) The Department publishes notice of the application and provides an opportunity for an informational meeting.

3) The Department develops permit limits.

4) The Department publishes a notice of tentative determination and conducts a public hearing, if requested.

5) The Department issues the permit if adverse comments are not received.

6) If adverse comments are received, the Department prepares a final determination and publishes additional notice providing 15 days to request a contested case hearing.

7) The Department issues the permit if the final determination is not contested.

8) If contested, administrative procedures for the appeal process are followed.

STANDARD TURNAROUND TIME

New minor facilities - 9 months

New major facilities - 12 months

Renewal minor facilities - 14 months

Renewal major facilities - 16 months

TERM OF PERMIT

Maximum of five years

FEE

Application fee: \$50 to \$20,000 depending on the volume of discharge, the type of industry, and how the water is used.

Annual permit fee: \$100 to \$5,000 depending on the volume of the discharge.

ADDITIONAL INFORMATION

General permits have either been issued or are being developed for a variety of industrial discharge categories (see section 3.02). In addition to the surface water discharge permit, the company may need one or more of the following permits:

Air quality permits (see sections 1.01 through 1.05);

State refuse disposal permit (see section 2.01);

Oil operations permit (see section 2.06); or

Hazardous waste permits (see sections 2.13 and 2.14).

Water appropriation and use permit (see section 3.07);

Wetland permits (see sections 3.16 through 3.18);

Erosion/sediment control plan approval (see section 3.19);

General permit for construction activity (see section 3.21);

DEPARTMENT CONTACT

Ed Stone

Industrial Discharge Permits Division

(410)631-3323

3.02 INDUSTRIAL WASTEWATER/STORMWATER GENERAL DISCHARGE PERMITS

The general permits for industrial wastewater discharge increase the efficiency of the Department's permitting process through the issuance of generic permits to categories of business activities which are generally very similar in their wastewater characteristics. General permits with standardized permit conditions have been established for:

- *Stormwater associated with industrial activities*
- *Surface coal mines*
- *Mineral mines, quarries, borrow pits, ready-mix concrete and asphalt plants*
- *Seafood processors*
- *Hydrostatic testing of tanks and pipelines*
- *Marinas*
- *Concentrated animal feeding operations*

AUTHORITY

FEDERAL: Federal Clean Water Act

STATE: Environment Article, Title 9, Subtitle 3; COMAR 26.08.01 through 26.08.04.

REQUIREMENTS

To obtain coverage under a general permit, all requirements listed in the general permit package must be met.

APPLICATION PROCESS

1) Complete a Notice of Intent (NOI) form and include a facility map, if required. To request a form, call (410) 631-3323 or download the form from our Web site: <http://www.mde.state.md.us>.

2) Mail the completed form and payment to:

MDE/WATER

P.O. Box 2057

Baltimore MD 21203-2057

3) The Department reviews the submitted NOI to ensure that the proposed discharge can be covered by a general permit.

4) The Department will notify the applicant in writing of coverage under the general permit.

STANDARD TURNAROUND TIME

Concentrated animal feeding operations - 150 days

All other general permits - 60 days

TERM OF GENERAL PERMIT

Maximum of five years

FEE

Application fee: \$0 to \$20,000 depending on the volume of discharge, the type of industry, and how the water is used.

Annual permit fee: \$0 to \$5,000 depending on the volume of discharge.

DEPARTMENT CONTACTS

Patsy Allen or Ed Gertler

Industrial Discharge Permits Division

(410)631-3323

3.03 SURFACE WATER DISCHARGE PERMIT (MUNICIPAL)

PURPOSE

The municipal surface water discharge permit is a combined state and federal permit under the National Pollutant Discharge Elimination System (NPDES). This permit is issued for sewage treatment plants and some water treatment plants that discharge to State surface waters. The permit is designed to protect the quality of the body of water receiving the discharge.

Anyone who discharges wastewater to surface waters needs a surface water discharge permit. Applicants include municipalities, counties, schools and commercial water and wastewater treatment plants, as well as treatment systems for private residences that discharge to surface waters.

AUTHORITY

FEDERAL: Federal Clean Water Act.

STATE: Environment Article, Title 9, Subtitle 3; COMAR 26.08.01 through 26.08.04.

REQUIREMENTS

PRE-APPROVAL: Individual residences are exempted from this pre-approval requirement.

POST-APPROVAL: Must meet all effluent limits, monitoring requirements, and other permit conditions.

LOCAL APPROVALS

Except for private residences, the proposal must be included in county water and sewer plans.

APPLICATION PROCESS

- 1) Submit a completed application form.
- 2) The Department publishes notice of the application and provides an opportunity for an informational meeting.
- 3) The Department checks that the project is in the county water and sewer plan.
- 4) The Department develops permit limits.
- 5) The Department publishes a notice of tentative determination and conducts a public hearing, if requested.

6) The Department issues the permit if adverse comments are not received.

7) If adverse comments are received, the Department prepares a final determination and publishes an additional notice providing 15 days for citizens to request a contested case hearing.

8) The Department issues the permit if the final determination is not contested.

9) If contested, administrative procedure for the appeal process is followed.

STANDARD TURNAROUND TIME

New minor facilities - 9 months

New major facilities - 12 months

Renewal minor facilities - 14 months

Renewal major facilities - 16 months

TERM OF PERMIT

Maximum of five years

Fee

None

OTHER APPROVALS

The following permit may also be required:

- Air quality permits (see sections 1.01 through 1.05);
- Water and sewerage construction permit (see section 3.06);
- Water appropriation and use permit (see section 3.07);
- Wetland permits (see sections 3.16 through 3.18);
- Erosion/sediment control plan approval (see section 3.19); or
- General permit for construction activity (see section 3.21).

DEPARTMENT CONTACT

Stephen Luckman

Municipal Discharge Permits Division

(410)631-3671

3.04 GROUND WATER DISCHARGE PERMIT (MUNICIPAL OR INDUSTRIAL)

PURPOSE

Groundwater Discharge Permits control the disposal of treated municipal or industrial wastewater into the State's groundwater via spray irrigation or other land-treatment applications. A groundwater discharge permit will contain the limitations and requirements deemed necessary to protect public health and minimize groundwater pollution.

AUTHORITY

STATE: Environment Article, Title 9, Subtitle 3; COMAR 26.08.01 through 26.08.04 and 26.08.07.

REQUIREMENTS

Pre-application review:

- 1) Favorable results from a preliminary site evaluation by the Department;
- 2) Municipal projects must be identified in a current county water and sewerage plan; and
- 3) Depending on the size of the projects, a copy of a hydrogeological study of the proposed site submitted to the Department for review and approval.

LOCAL APPROVALS

Proposed municipal projects must be included in county water and sewer plans before the Department can process a permit. Locally issued permits for activities such as building and sediment control may be needed for these projects but are not required for the Department to process a groundwater discharge permit.

APPLICATION PROCESS

- 1) The Department performs a preliminary site evaluation.
- 2) The applicant performs a hydrogeological study.
- 3) The applicant submits a complete permit application.
- 4) The Department publishes notice of permit application and provides an opportunity for an informational meeting.
- 5) The Department holds an information meeting, if requested.
- 6) The Department reviews and approves the hydrogeological report.
- 7) The Department drafts the permit and issues a notice of tentative determination.

- 8) The Department holds a public hearing, if requested.

- 9) The Department prepares the final determination with additional public notice, if any adverse comments are received at public hearing.

- 10) The Department issues the permit if the final determination is not contested.

- 11) If contested, administrative procedures for the appeal process are followed.

STANDARD TURNAROUND TIME

New minor facilities - 9 months

New major facilities - 12 months

Renewal minor facilities - 14 months

Renewal major facilities - 16 months

TERM OF PERMIT

Maximum of five years

FEE

Application fee (for industrial): \$50 to \$20,000 depending on the volume of discharge, the type of industry, and how the water is used.

Annual permit fee (for industrial): \$100 to \$5,000 depending on the volume of the discharge.

Municipal permits: None

OTHER APPROVALS

The following approvals may also be required in addition to the groundwater discharge permit:

Air quality permits (see sections 1.01 through 1.05);

Oil operations permit (see section 2.06);

Water and sewerage construction permit (see section 3.06);

Water appropriation and use permit (see section 3.07);

Well construction permit (see section 3.14);

Wetland permits (see sections 3.16 through 3.18);

Erosion/sediment control plan approval (see section 3.19); or

General permit for construction activity (see section 3.21).

DEPARTMENT CONTACT

Dr. Ching-Tzone Tien

Groundwater Permits Division

(410)631-3662

3.05 TOXIC MATERIALS PERMIT

PURPOSE

This permit is required for any homeowner, farmer, local government, or other person who wants to control aquatic life in ponds, ditches or waterways by the deliberate use of toxic chemicals (e.g., mosquito control, algae removal).

AUTHORITY

STATE: Environment Article, Title 9, Subtitle 3; COMAR 26.08.03.02.

REQUIREMENTS

The proposed product and method of application must be approved by the Department. The permit will also include a schedule for applying the product.

OTHER APPROVALS

Commercial and public agency applicators of pesticides will also need a license from the Maryland Department of Agriculture.

APPLICATION PROCESS

- 1) Submit a completed application.
- 2) The Department reviews, and issues or denies the application. Although public participation is not required for this permit, the Department recommends that the applicant keep the public informed.

STANDARD TURNAROUND TIME

45 days

TERM OF PERMIT

Maximum of five years

Fee

None

ADDITIONAL INFORMATION

In case of an emergency, a limited permit for certain chemicals can be obtained from the local soil conservation district office in one to three days.

DEPARTMENT CONTACT

Edward Gertler
Industrial Discharge Permits Division
(410)631-3323

3.06 WATER AND SEWERAGE CONSTRUCTION PERMIT

PURPOSE

The purpose of water and sewerage construction permit is to ensure that infrastructure projects throughout the State are designed on sound engineering principles and comply with State design guidelines to protect water quality and public health. Water and sewerage construction permits are required before installing, extending or modifying community water supply and/or sewerage systems including treatment plants, pumping stations and major water mains and sanitary sewers. These permits ensure conformity with local water and wastewater comprehensive plans and ensure that there is adequate funding for long-term operation.

A major water supply system, including structures and equipment, treats raw water and distributes potable water to serve 25 or more of the same persons on a day-to-day basis at least six months out of a year, or to serve 15 or more residential connections.

A major sewerage system, including structures and equipment, collects, conveys and treats waste waters generated from domestic, industrial, and commercial establishments.

The following major water and sewerage facilities need construction permits:

Major water facilities:

- Water mains (diameter >15")
- Pumping or booster station
- Elevated tank or storage tank
- Water treatment facilities
- Utilization of well water for public water supply

Major sewerage facilities:

- Gravity sewers (diameter >15")
- Pumping station
- Force mains
- Wastewater treatment facilities
- Community or multiuse septic tank system in which a pumping station and a force main are included

The following minor water and sewerage facilities do not need water/sewerage construction permits:

- Gravity sewers or water mains with diameter 15" or smaller
- Pumping stations with average daily flow 5,000 gpd or less
- Installation of minor items such as a meter, valve or hydrant
- Replacing equipment with new equipment of equal capacity

- Well construction (drilling)
- Construction of conventional septic tank or mound system
- Construction of facilities unrelated to water/wastewater conveyance or treatment at a water/wastewater treatment plant

AUTHORITY

STATE: Environment Article, Title 9; COMAR 26.03.12.

REQUIREMENTS

PRE-APPROVAL: Applicants must show that the proposed facility is included in the current county water and sewerage comprehensive plans, and certify that the proposed facility will be operated either publicly or privately under a sound financial management plan.

POST-APPROVAL: The project must be constructed in accordance with the approved plans and specifications.

LOCAL APPROVALS

A building permit and septic system construction permit may be needed for the project, contact the county government.

APPLICATION PROCESS

- 1) Submit plans and/or specifications with the permit application.
- 2) The Department acknowledges receipt of plans and/or specifications, determines the permit fee, and assigns a permit number.
- 3) The Department verifies that the project is within the service area of the current county water and sewerage comprehensive plans, and reviews/approves the financial management plan (if applicable) for the project.
- 4) The Department reviews the specifications for conformity with State design guidelines and COMAR 26.03.12. After engineering comments are addressed, the Department issues the permit.

STANDARD TURNAROUND TIME

3 months

TERM OF PERMIT

One time permit, assuming no changes to the equipment.

FEE

None for projects that qualify for a government waiver as municipal permits.

Privately financed water and sewerage capital projects are charged the following fees (COMAR 26.03.12.):

- Water mains and gravity sewers/force mains: \$125 to \$1800 depending on the length of the mains.
- Water and wastewater pumping stations: \$400 to \$1400 depending on the design capacity.
- Water treatment plants: \$250 to \$2000 depending on the design capacity and the number of treatment processes.
- Wastewater treatment plants: \$450 to \$2000 depending on the design capacity and the number of treatment processes.

OTHER APPROVALS

The following permits may be needed:

Air quality permits (see sections 1.01 through 1.05);
Sludge utilization permits (see section 2.03);
Municipal discharge permits (see sections 3.03 and 3.04);
Water appropriation and use permit (see section 3.07);
Well construction permit (see section 3.14);
Wetlands permits (see sections 3.16 through 3.18);
Erosion/sediment control approval (see section 3.19);
General permit for construction activity (see section 3.21); or
State Highway Administration's permit for construction of
water mains/sewers near highways.

DEPARTMENT CONTACT

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MARYLAND DEPARTMENT OF AGRICULTURE
Statutes and Regulations Concerning Nonpoint Source Pollution

Annotated Code of Maryland

Agriculture Article

	First Citation/ Date Last Amended
§ 2 - Department of Agriculture	
btitle 2 - Maryland Agricultural Commission	1973/1991
Advisory body established to provide the Secretary with recommendations. Advice concerning NPS programs could be rendered.	
btitle 4 - Board of Review of Dept. of Ag.	1973/1977
Allows any aggrieved person to appeal a decision, action, or non-action of a Department unit or employee. Any regulatory actions regarding NPS pollution control could be appealed.	
btitle 5 - Maryland Agricultural Land Preservation Foundation	1974/1992
Allows the Department to acquire land or easements to preserve agricultural or wooded lands. Advisory boards to be established in each agricultural county. A fund is created to assist in the process.	
§ 3 - Regulation of Livestock & Poultry	
btitle 2 - Regulation of Infectious and Contagious Livestock and Poultry Diseases (disposal practices)	1973/1976
Sections 3-108 and 3-109 allow dead or slaughtered animals to be disposed, buried, or burned. Depending upon procedures utilized, NPS pollution of water or air could result.	
§ 5 - Pesticide and Pest Control	
btitle 1 - Md. Pesticide Registration and Labeling Law	1973/1992
All pesticide products used or sold in Maryland shall be registered. Annual registration fee of \$20 raised to \$35 in 1989 and \$60 in 1992. Funds <u>could</u> be available to assist farmers and homeowners in disposing of unwanted materials, thus reducing inappropriate disposal.	
btitle 2 - Pesticide Applicator's Law	1973/1992
This subtitle provides the Secretary with the authority to adopt regulations concerning the storage, sale, distribution, exchange, use, and disposal of pesticides. It also requires that educational programs on the use of pesticides be designed and conducted. Use and sale restrictions, along with the educational programs, help to minimize releases to the environment.	

Code of Maryland Regulations (COMAR)

Title 15 DEPARTMENT OF AGRICULTURE

	First Citation/ Date Last Amended
Subtitle 01 - Office of the Secretary (AA §§ 2-103)	
Chapter .02 - Distribution of Funds for the Maintenance of Drainage Systems for	
Chapter .05 - Cost Sharing - Water Pollution Control Program	
(AA §§ 2-103 & 8-703)	1983/1992
.03 - Program Eligibility: Priority and Geographic Areas	
.04 - Application Procedures	
.05 - Review and Approval	
.06 - Technical Assistance	
.07 - Cost Sharing Agreement	
.08 - Project Establishment	
.09 - District Supervision	
.10 - Distribution of Cost Sharing Funds	
.11 - Project Monitoring	
.12 - Failure to Establish or Maintain BMPs	
Chapter .07 - Aquaculture Grant Program	
Subtitle 02 - Board of Review Procedure	
Subtitle 03 - Weights and Measures (AA §§ 11-203 & 11-206)	
Chapter .01 - Commercial Weighing (of benefit in assessing nutrient content of	
Chapter .02 - Packaging and Labeling (same)	1973/
Subtitle 05 - Pesticide Use Control (AA §§ 2-103,5-204,5-208,5-210.2, & 5-210.4)	
Chapter .01 - Use and Sale of Pesticides, Certification of Applicators and Consultants, and Licensing of Pesticide Businesses	
General Regulations (requires that pesticides be applied such that they do not move from the intended site of application; registration, certification and training requirements for applications established; access is limited for "Restricted Use" products; certain use records required. (being revised - 1993)	
Chapter .02 - Bulk Storage Requirements (being developed - 1993)	1978/1986

Subtitle 3 - Plant Disease Control 1973/1992
Broad authority is given to the Secretary to control plant, animal, and human pests by various means, including aircraft dissemination of pesticides.

Subtitle 4 - Mosquito Control 1973/1979
Pesticides may be applied by the MDA or others under contract to control mosquitoes.

Subtitle 9 - Anti-fouling Paints 1887/
This subtitle establishes restrictions concerning the sale and use of anti-fouling paints containing tributyltin.

Title 6 - Commercial Feed and Fertilizer and Agricultural Liming Materials

Subtitle 2 - Maryland commercial Fertilizer Law 1973/1992
Authority to control the quality, sale, and distribution of fertilizer products is granted to the Secretary. This control could be of value if nutrient management programs are instituted to control NPSs of nutrients.

Title 8 - Soil Conservation

Subtitle 1 - General Provisions 1973/1983
"It is the policy of the General Assembly to provide for the conservation of the soil, water, and related resources of the State and for the control of soil erosion..... It is also the policy of the State "that activities related to soil conservation..... shall be pursued irrespective of the fact that such activities may displace or limit economic competition."

Subtitle 2 - State Soil Conservation Committee 1973/1988
Committee established.

Subtitle 3 - State Soil Conservation Districts 1973/1990
Districts established: each county (not including Baltimore City); additionally, the Caloctin Creek watershed in Frederick County is designated as an independent district. Broad authority assigned to the supervisors to carry out preventive and control measures to reduce soil erosion (8-306); including land use regulations (8-307).

Subtitle 6 - Drainage of Agricultural Land 1973/1987
The "Powers and Duties" cited in 8-601 call for the Secretary to promote and encourage the drainage of agricultural lands. This could be construed to be in conflict with wetland preservation statutes in the Natural Resources Article. The 1987 revisions to this subtitle, however, require regulations to be developed jointly with MDE and DNR.

Subtitle 7 - Cost Sharing - Water Pollution Control 1982/1991
Non General Funds are distributed to farm tenants to implement approved measures to control soil erosion. The State will provide a maximum of 87½% of the required funds, up to a maximum of \$50,000 for any project.

Subtitle 8 - Nutrient Management Certification and Licensing 1992/
This subtitle provides MDA with the authority to establish procedures to certify and license persons providing nutrient consultation services. It also gives MDA the authority to prescribe the content of nutrient management plans provided by licensed consultants. (note - The certification and licensing aspects of this statute are being implemented on a voluntary basis)

Subtitle 06 - Plant Pest Control (AA §§ 5-301-5-313, 9-302) 1978/1986

Chapter .01 - Movement of Vegetable Plants into Maryland

Chapter .02 - Plant Pest Control Regulations

(These two chapters control the importation and distribution of diseased or infected plants. These activities reduce the need to use pesticide products.)

Subtitle 08 - Turf and Seed

Chapter .01 - Maryland Seed Law (AA §§ 9-201 & 9-202) 1966/1987

.05 - Noxious Weed Seed (limits weed seeds and therefore need to use herbicides)

Chapter .02 - Maryland Turf Grass Law (AA §§ 9-201 & 9-202) 1966/1987

.04 - Weeds (same as for seeds)

Subtitle 15 - Maryland Agricultural Land Preservation Foundation

(AA §§ 2-504 & 2-509) 1979/1991

Chapter .01 - Guidelines for the Maryland Agricultural Land Preservation Program

.01 - General

.02 - Agricultural Preservation Advisory Boards

.03 - Agricultural Preservation Districts (procedures for defining, establishment, and application to join are established)

.04 - Termination and Alteration of Districts (procedures)

.05 - Easements

.06 - Foundation Approval (scoring procedures)

.07 - State and Local Funds (40% local match required)

Chapter .02 - Formula for Determining the Agricultural Value of Land

Subtitle 18 - State Chemist (AA §§6-203) 1982/1988

Chapter .01 - Definitions for identity of Commercial Fertilizer

Chapter .02 - Registration and Labeling of Pesticides

Subtitle 20 - Soil and Water Conservation

Chapter .01 - Agricultural Drainage Projects (AA §§8-603) 1986/

.01 - Purpose: "These regulations establish the requirements for the design, construction, operation, and maintenance of agricultural drainage projects that are financed or managed by public drainage association. To the maximum extent practicable, these regulations assure protection of natural resources and prevent water pollution by non-point source pollutants associated with agricultural drainage projects."

.02 - Definitions

.03 - General Requirements

.04 - Agricultural Drainage Project Plans

.05-.07 - Construction or Reconstruction Design, Maintenance, & Operations Criteria

.08 - Agency Approval

.09 - Inspection and Enforcement		
Chapter .02 - Maryland Conservation Reserve Program (AA §§8-805)		1988/
Farm owners that adopt certain land conservation practices, including vegetated buffer strip, are eligible for up to \$20 per acre per year for ten years from the State. Enrollment in the corresponding federal program is mandated.		
Chapter .03 - Deferral of Mitigation of Nontidal Wetlands on Agricultural Land (NRA §§8-1205)		1991/
Economic hardships defined to allow deferral of wetland mitigation.		
Subtitle 21 - Antifouling Paints (AA §§5-104 & 5-904)		1988/
Limitations on the possession and use of paint containing tributyltin are presented.		
Subtitle 22 - Organically Produced Commodities(AA §§10-602 & 10-1402)904)		1992/
This regulation provides certification for "organically produced commodities", and a related economic benefit, to those farmers that avoid the use of chemical pesticides.		